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# Journal of the

## Association of American Medical Colleges



Organizing a New Medical School. <i>Edward L. Turner</i> .....	273	The Art of Medical Practice. <i>Lyman Allen</i> .....	296
The Medical Curriculum and the Teaching of Psychiatry. <i>Charles D. Aring</i> .....	280	Tropical Medicine Education. <i>Thomas W. M. Cameron</i> .....	305
The Tennessee Four Quarter Plan After Eighteen Years. <i>O. W. Hyman and T. P. Nash, Jr.</i> .....	286	Program for Sixtieth Annual Meeting .....	310
The Contribution of the South Dakota Basic Science School to the Physician Population of Its State and Area. <i>Walter L. Hard</i> .....	292	Editorials .....	313
		College News .....	318
		General News .....	330
		Book News .....	334

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JOURNAL  
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FRED C. ZAPFFE, Editor

September, 1949

**Organizing a New Medical School**

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Seattle, Washington

One morning, while working in my office, I received a long distance call from Seattle inviting me to consider the deanship of a new medical school to be developed at the University of Washington. I became intrigued by the challenge and opportunities that might exist if the University and the State of Washington were sincerely interested in and ready to develop really good professional schools in medicine and dentistry "from scratch."

A visit to Seattle convinced me that the University of Washington, the State of Washington and the professional groups in medicine and dentistry in the state were behind the development of the new schools established by legislative decree in 1945. It was obvious that the University administration realized that the sum of \$3,750,000 set aside by the 1945 legislature to begin the development of the schools of medicine and dentistry and a teaching hospital was inadequate to more than start the program. Their awareness of this and their understanding that the total development would involve several times that initial allocation was adequate encouragement for me to accept the invitation.

The day after arrival I inquired as to where my office would be. I was taken to Bagley Hall, the chemistry building, and presented with a room that had been designed as a student lounge. It was 24 feet wide and about 65 feet long. My desk stood in one corner near a large fireplace with no other furniture except a few lonesome chairs. The closest simile I could think of to my office was a picture I had seen of Il Duce's (Mussolini's) private office where he, with his bald pate, sat behind his desk in one end of an enormous room that had no other furnishings. To say the least, it was an impressive office.

Dean Ernest Jones who had accepted the challenge of developing the School of Dentistry had already arrived on the campus and was installed in another room in Bagley Hall. Since there was so much in common in the development of these two new schools, we persuaded the Buildings and Grounds Department to divide my office into seven smaller areas and moved the medical and dental school administrations into them to facilitate cooperation.

To strengthen the program, foster cooperation and avoid unnecessary duplication of effort and facilities, the University administration created the Division of Health Sciences. This division included the Schools of Medicine, Dentistry, Nursing, Pharmacy and the Student Health Service. A Board of Health Sciences was appointed, with the dean of the School of Medicine as chairman, to supervise the major planning of physical facilities and the appointment of key personnel. This development of a Division of Health Sciences has proven to be a sound move on the part of the University for it has resulted in a thoroughly excellent program of cooperation between medicine, dentistry and nursing and the university at large from the standpoint of our basic medical science program.

Believing that the secret of reasonable success in a program of the type the University was initiating lay primarily in the full time key personnel who were appointed to the faculties, Dean Jones and I set out to find the individuals whom we felt capable of meeting the challenge that lay ahead. It was stimulating to find that individuals of the caliber needed were not difficult to find, for they were as intrigued by the opportunities afforded in starting from the beginning as we had been. This was quite contrary to some of the comments I had heard in the East when some of my friends in medical education remarked that I would not be able to find top notch individuals who would be willing to go abroad. Seattle still seems a long way from Boston or Baltimore to many individuals who have not been west of the Alleghenies.

As each department head was selected by the Board of Health Sciences, he became a member of the executive committee and thereafter has played the role of developing his departmental faculty and planning the facilities for his department's portion of the new structures. In a rapidly expanding and already overcrowded university the initial developments for the Schools of Medicine and Dentistry were exceedingly difficult, for there was no room for new departments. With the aid of a most cooperative Buildings and Grounds department our basic medical sciences have utilized attics, basements, temporary structures and almost any space that could be salvaged. We have had similar aid in getting our clinical departments started. Enthusiasm, cooperation, faith and hope made it possible to get our new schools underway by the fall of 1946, although for a time there was considerable question as to whether they should be started until there was assurance of more adequate financing. The decision of the Board of Health Sciences to go ahead with the first classes in medicine and dentistry in the fall of 1946 was a wise decision, although it posed some very difficult problems.

Planning for physical facilities presented some very real difficulties. It was obvious that the architects who had been appointed by the Board of Regents were not familiar with the needs of physical facilities for schools of medicine and dentistry. The first results at plans, after Dean Jones and I had listed needs, were most inadequate.

The decision to have the architects take a trip to study medical and dental



schools throughout the country solved the basic problem of their orientation. Sixteen institutions were selected, some for the fine developments in them which we hoped might be incorporated in our new units, and some for the not so fine things which we hoped to avoid in this plant. This two month architectural tour paid tremendous dividends, for on their return it was obvious that the concept of needs for both teaching and research in professional schools of this type had been clarified for the planning and supervising architects. From then on basic planning moved rapidly and effectively.

Our objectives were to develop a well integrated unit adequate for the present needs in teaching and research for medicine, dentistry, nursing and overall university requirements in these fields. We also desired to have physical facilities of flexible nature that would prevent them from becoming easily outdated or unsatisfactory in the years ahead.

A modern streamlined type of architecture was chosen. The general desire was to place the library, auditorium and administrative facilities in the "heart" of the structure with the basic medical sciences to the west, dental clinical facilities to the south and the future teaching and research hospital to the east. Interior structure was designed to be as flexible as possible so that none of the interior walls are supporting structures. Any interior wall can be rearranged by the simple process of taking down the hollow concrete blocks and placing them in a new position. No plaster was wanted on ceilings or walls in any of the laboratory areas. Utilities were to be exposed so as to make maintenance and repair as easy as possible.

Although we have endeavored to dedepartmentalize as much as possible, efforts were made to allocate areas so that activities that should be closely correlated were placed in adequate proximity. Thus, Public Health and Preventive Medicine occupy the laboratory areas on the main floor closely coordinated with the facilities for the Department of Microbiology. The second floor is entirely physiological, the wing to the east housing physiology, the middle wing housing pharmacology and the west wing housing biochemistry which, in turn, has been placed adjacent to clinical research laboratories and the future hospital. The floor above this area is allocated to anatomy, which occupies the western half and to pathology which occupies the eastern half. Again, pathology has been placed adjacent to clinical laboratory areas and the future hospital site.

Careful studies were made in regard to quarters for laboratory animals. The entire upper floor over the areas now under construction has been designed to house centralized animal quarters. This area will be under veterinary supervision. It is tiled throughout, rooms are individually thermostatted so as to make it possible to control to optimum temperature conditions, the area is soundproofed, entirely separately ventilated and will have no openings to the outside. Areas for cage sterilization and cleaning, food preparation, experimental surgery and medicine, etc., are included. Animals will be kept in stainless steel cages, the stainless steel having been obtained through surplus prop-

erty, and the cages constructed by our sheet metal shops in the Buildings and Grounds Department.

The auditorium, which seats just under six hundred, has been designed from the standpoint of audiovisual engineering. It is our hope to center many of the local medical, dental and nursing activities, as well as state professional meetings in the Division of Health Sciences of the University of Washington. Our major objective in developing this type of physical plant has been that it shall be the site of a continuing educational program for the undergraduate, graduate and postgraduate professional. Thus, in our auditorium we are bringing in the finest audiovisual equipment that can be obtained and it is being installed under the supervision of audiovisual specialists. We have channeled the area so that when the hospital is constructed, and television of sufficient magnification perfected and practicable, it will be possible to project from operating rooms in the hospital or dental clinic to professional gatherings in the auditorium.

We have also endeavored to develop a useful library with certain special features. Books and bound periodicals frequently used are placed in open stacks through which we desire to have the students browse freely. We do not anticipate any undue loss of books or excessive confusion resulting from this development. There are numerous small glass panelled study rooms within the library where student groups may study or converse or where instructors may hold small group conferences. The current periodical room is an informal area and the closed stacks and special work rooms, seminar area and storage are directly below the main library floor.

During the period of early planning in the spring of 1946, the department heads who had been appointed were flown out for a series of conferences. It was during this period that the problem of faculty housing offered such obstacles that it became a question as to whether we actually could begin our program. Unless it was possible for the university to guarantee housing for new faculty coming to Seattle it was doubtful whether anyone should leave a roof that he already had over his head.

The fact that the University administration soon made temporary housing facilities available for faculty as well as G. I. students was, perhaps, the only thing that saved the situation and made it possible to guarantee new faculty a roof over their heads. These facilities have played a most important role in making it possible to bring in new faculty families who could not have risked the venture without assurance of at least temporary housing.

It was obvious from the beginning that it would be essential to develop clinical facilities for dentistry as quickly as possible. Unlike medicine, where local hospital affiliations made the development of the initial teaching program possible, no such affiliations existed for dentistry. Consequently, the physical facilities for dentistry have been developed as early as feasible so as to make third year dental student teaching possible this year.

Curriculum planning has been carried forward with every possible effort

toward intelligent integration. Again, efforts have been made to keep departmental barriers minimized and to coordinate certain teaching activities. To say the least, our curriculum at present is a fluid one, and we hope that it will constantly be revised and modified through a mutual effort to afford our students the best possible training.

It was a great day, when on March 5, 1947, the first spadeful of earth was turned by President Allen and former President Sieg on the site of this new structure. At that time our funds permitted the construction of only units A, B and C. During the summer and fall of 1947, additional funds allocated from the Governor's special budget for capital building construction became available so that the remainder of the basic medical science area could be initiated. The units now completed and those under construction represent an investment of about nine million dollars for buildings and equipment.

At the present time plans are being carried forward for the Teaching and Research Hospital. A great deal of basic thinking has gone into this hospital planning. Our group has deliberately avoided the appointment of a so-called hospital consultant as we feel we have a better concept of our needs than such an individual might have. Later on, after we clearly decide what the overall basic requirements are such aid may be sought. We are endeavoring to plan a hospital that can serve as ideally as possible the functions of a teaching and research unit. It is currently estimated that this hospital, which will accommodate approximately 450 patients with adjunct research facilities, will cost between eleven and thirteen million dollars, of which ten million is being sought from the state.

Both medical and dental school administrations have endeavored to work in close harmony with their respective local and state professional groups and, on the whole, the cooperation and spirit of mutual confidence has been excellent. There have been many problems to tackle, such as relationships of full time clinical staff to their professional groups, consultation practice, the program for referral of patients to the proposed hospital, and many others. But gradually these problems have been ironed out to mutual satisfaction. There will be many more ahead, but we believe that through frank and mutual cooperation they can, and will, be solved.

Thus today we stand, not at the bottom of the hill, but part way up; in fact, we can begin to peep over the brow. As dean and executive officer of the School of Medicine, I frankly admit that I am proud of our faculty. They have tackled a tough job and made a grand start, even though with terrific handicaps at times.

Not only have they done a magnificent task of basic developments in teaching, but this place is literally like a hive of bees in various fields of research. Everyone is doing something. There is a spirit among the faculty that is thoroughly contagious. Besides our full time staff there are numerous part time or clinical courtesy staff members deeply involved in some of these investiga-

tive programs. It is our desire to foster and encourage practicing clinicians to continue activities of this type. It has been gratifying to find that in the course of two years more than half a million dollars in grants for research have come to this infant institution. This, I feel, is a tribute to the faculty personnel who could not have been the recipients of such grants had they not merited the confidence of the grantors.

Our group is continually talking and discussing teaching and research developments. They are talking about premedical training and about how to best develop opportunities for the exceptional students as well as the "run-of-the-mill." Committees are at work on our undergraduate curriculum, on our graduate and postgraduate programs to come, and in fact on almost every phase of the program. We are determined to do a task of which we all can be proud. I feel that there are no halfway measures in good modern medical education and research, and that we either must do a "topnotch" task . . . or we should not do it at all. We are out to train basically sound physicians, to vitalize the importance of the patient as an individual, and to follow through this basic training with the kind of graduate and postgraduate opportunities that will aid both the general practitioner and the specialist.

I should like to indicate in passing that our program to date could not have developed so rapidly without the full cooperation of a thoroughly informed university administration. President Allen, the Board of Regents and other administrative officers have done everything possible to support the objectives that we have set for this new school. The Legislature and state officials have made the development to date an actuality through adequate financing. The Medical, Dental and Nursing professions and their representative organizations in the state have cooperated sincerely and effectively. One of the most stimulating aspects of the development of this school lies in the fact that it was actually the medical and dental professional groups who initiated the legislation that gave birth to the two new schools in 1945. It is my firm conviction that in due course we shall attain the objectives that have been set as goals.

But "the best laid plans of mice and men" can sometimes encounter unexpected difficulties and complications. Last November, for instance, the citizens of the State of Washington voted for Initiative 172 which is designed to make all Public Welfare recipients become private patients, which adds a tremendous financial burden to an already stretched budget. Of course, we are supposed to be an educated nation, and are all supposed to know how to read by the time we reach the age of being eligible voters. Apparently, the majority of the voters forgot to utilize their knowledge of reading and failed to familiarize themselves with the implications of Initiative 172 before they cast their votes. Be that as it may, prior to the passage of Initiative 172 the pattern for a satisfactory clinical teaching program at King County Hospital had been developed. But the introduction of this new program for Public Welfare recipients has raised issues of considerable magnitude from many

angles. Incidentally, since the State has voted for this initiative, it is essential that they realize the full implications of its cost. It is important, therefore, that fees be collected for services to all patients on the program.

The medical profession who compose the staff membership of King County Hospital are endeavoring to arrive at some logical solution for fee collection, possibly with the establishment of a fund for old age retirement or emergency aid fund for physicians. Whether this can legally be accomplished without encountering insuperable hurdles with the Department of Internal Revenue is a problem that is involving much study on the part of this group.

Furthermore, since 172 makes all of its recipients private patients, the necessity of continuing an outpatient service at King County Hospital is seriously questioned. Lack of outpatient teaching facilities will make the conduct of the fourth year clinical instruction program exceedingly difficult. However, the initiative does not cover the large group of medical indigents who do not qualify for Public Welfare. If satisfactory financial arrangements are consummated by the current legislature to care for this group it will be possible to continue outpatient activities and probably actually increase their teaching value because the former heavy outpatient load will be reduced by withdrawal of the Public Welfare recipients and will allow for better care for the medically indigent. This still remains to be solved.

This has been a fascinating experience and one in which I feel privileged to have played a role, even though the "going" gets awfully rough at times. Between building a faculty, planning early budgets that had to be somewhat imaginary at that stage in order to be adequate, helping to develop curricula, and the thousand and one other phases of endeavoring to interpret the program, you can probably begin to understand why I have sometimes felt like Alice in Wonderland must have felt when the Duchess remarked, "You don't know much, and that's a fact," or like the old sailor, of whom some one wrote years ago that—

"There was an old sailor my grandfather knew  
Who had so many things which he wanted to do  
That, whenever he thought it was time to begin,  
He couldn't because of the state he was in."

## The Medical Curriculum and the Teaching of Psychiatry\*

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In Dr. Raymond B. Allen's<sup>1</sup> provocative essay "Medical education and the changing order" there may be found the following statement:

"When it is recognized that undergraduate medical education makes no effort to provide training in the highly specialized fields of medical and surgical treatment and is concerned only with a thorough grounding in the knowledge and skills of general medical and surgical diagnosis and in such skills in medical and minor surgical treatment as are readily within the grasp of the undergraduate student, the problem of selecting materials for undergraduate study loses much of its difficulty." Doctor Allen then goes on to ask, "Have the specialization and departmentalization of medical science at the undergraduate level handicapped the organization of a unified curriculum which will adequately correlate medical knowledge?"

From this statement of the problem of the medical curriculum, Doctor Allen goes a step further noting that "... it would seem reasonable to expect that such committees and the faculties of medicine, could by dint of intensive study and thinking, define the aims of undergraduate medical education in terms of (1) specific skills to be acquired; (2) area of knowledge to be covered, and (3) types of integration of subject matter to be achieved. Yet this has never been done thoroughly."

The medical curriculum has long been found wanting; the manifold deliberations of committees concerned with it have furnished material for the satiric plays of medical students for generations, and well they might. Despite the attention devoted to the curriculum, there has been no change in its basic structure since it was put into effect in this country by the great doctors at the Johns Hopkins School of Medicine in 1893. Something has been added, to be sure, but I believe we may agree that the philosophy of the medical curriculum in the United States remains unaltered after more than half a century.

Early in the 20th century, medical schools generally were introduced to the then odd and angular discipline of psychiatry. I need not enunciate here where the emotions are an open book why it had so much trouble becoming established. To the detriment of the spirit, to say nothing of public health, the denial which met psychiatry engulfed its clientele or perhaps the latter was the antecedent reaction. In any case as far as the medical curriculum was concerned there occurred a continued evolvment of what might lightheartedly be termed factual material. Indeed there was developed over the years a veritable rash of technical procedures which, while they probed the innards, so often left untouched the seat of the trouble. These tests and techniques, contrary to

\*From the Department of Neurology, University of Cincinnati College of Medicine and the Cincinnati General Hospital. A presentation before the American Society for Research in Psychosomatic Problems, May 2, 1947.



what had been the experience of psychiatry, were courted with avidity; evidently they fitted certain concepts of what was considered to be scientific. After these maneuvers had been performed, responsibility was dissipated to the vanishing point since then many physicians took refuge in the idea that there was nothing further to be done or there was nothing the matter with the patient. Thenceforth the latter took charge of his own illness, a course tacitly approved by his physician.

Even until now comparable attitudes have prevented the emergence of factual statistics about the incidence of disease, obviously the most realistic factor upon which there might be constructed a vital and dynamic curriculum for students of medicine. It would seem to be within the bounds of reason to expect medical teaching to be reflective of the ills of mankind. We know this not to be exactly the case. As an example, in my own specialty it is enlightening to collate the topics of neurological lectures and demonstrations offered to students in medical schools, with the material seen by the same teacher in his private practice. Instead of medical teaching realistically reflecting the sufferings of the citizenry, it must be apparent that too often the practice of medicine has reflected anachronistic medical teaching.

A first and secure premise on which we may proceed in the pursuit of a better curriculum is that a reasonably exact knowledge of the incidence of diseases is requisite. So much sport has been had with statistics that I will refrain. Figures on morbidity are rather wide of the mark, which is precisely as we would expect since we are most sympathetic with the difficulty experienced by the practitioner of medicine in recognizing emotional illness. The basis for this deficiency might be referred back to the curriculum under which he labored in his student endeavor and then we will have come the full circle, to be sure another of those ubiquitous circles of the vicious variety.

But ideally we should want to take the next step and consider by what means the medical curriculum may be renovated or the practitioner of medicine enlightened. Here my concern is with the curriculum. As it now stands, the majority of faculties of medicine are composed of persons quite satisfied with, in fact intent upon precedent. There is reason for them to accept morbidity statistics as they believe them to be. As one considers the question more closely it seems realistic to note that curriculum change is not likely to come about through the efforts of the committees now extant in our medical schools. It is perhaps to be hoped that the change will come by evolution and not revolution. As most change it should likely occur through the efforts of younger men; those who having been exposed somewhat fortuitously to newer concepts may, before they become of an age where they connect the past instead of the future with the present, accomplish this enlightenment of the young.<sup>2</sup>

It may be asked if change is to be expected why it hasn't already occurred. I would answer that an important reason why it has not is because of the incoherence of teaching, and not the least psychiatric teaching. Teachers of medicine in general reflect the lack of instruction in their own occupation; a degree in medicine does not fit one for teaching. Here we have the approbation of



the Harvard Committee report (General education in a free society<sup>3</sup>) wherein it is stated "There is no educational reform so important as the improvement of teaching." So short a time ago as my student days, psychiatry was still being taught by men who knew pitifully little about their subject let alone about teaching, and about as bad, they inspired little confidence in their colleagues. Today some of these determinants are still with us, however, it is not unusual to find instructors outside the discipline of psychiatry lending consent, so to speak, to the doctrines of modern psychiatry. This I would point to as a highly significant development, hardly to be treated lightly and only second in importance to the rise of excellent teachers of psychiatry.

I might mention here my considered feeling that the student should be represented on deliberative groups intent on medical education. We expect the student to reach maturity ready to do an adult's work, after having treated him oftentimes like something of an infant. Little wonder then that we find the modern student of medicine to be immature, when we have contributed to it. The better student has never exerted the influence that he should and could in conceiving and executing policies of the medical school and of medical education. Emerson said "The secret of education lies in respecting the student." We might go beyond respect, to tap this potential source of vigorous energy and resurgent thought even though it be untempered by experience. Most faculty groups suffer from an excess of experience quantitatively, which would more than offset that lacked by student representatives.

Today, I am reasonably certain that the good student should exert more influence on the trends of medical education than he has done or is doing. Here there is much latent power. I believe that we might entrust some of the present, as certainly we must all of the future of medicine with our students. If the curriculum were to be left to their devices we know quite well what would happen, it would be revamped in no uncertain style, philosophy and all. Here then is some indication of our course, which I would surmise is a middle way between holding past gains and the impetuosity of reform—in other words, evolution.

We who know about the catholicity of emotional illnesses must bring the evidence to bear on the young—not in the overbearing, imperious manner of some physician-teachers but in a way to explore the Emersonian tenet of education which has as its keystone respect of the student, respect not only for his intelligence, but also for his integrity, his wit, and his spirit. Let us then bear down with truth on the young and take him into our councils, since God will take care of the remainder. Those of us in teaching, and I suppose this includes most of us, must deport ourselves in the fashion of Robert Walpole with sense, humor, judgment, and manners. At the risk of triteness, I would ask you to examine yourselves in an attempt to know how much you are preventing the very thing that you would appear most to desire. We might respect the student exactly as much as he deserves which would be considerably more than he now receives.

Recognizing the unevenness of students, even as that of teachers, I had

considered suggesting alternative curricula geared to the level of the above average and sub-average, on the theory that they may perform quite different functions after student days. The fallacy in this course is readily apparent since it would encourage the continuance of admission to schools of medicine of a modicum of the mediocre. This is proceeding in precisely the wrong direction; we know well that we deserve and must recruit better material for medical schools. Parenthetically I wonder how many in this audience have even spotted outside the confines of their own family a promising youth and discussed with him the advantages of a medical education? Do I suggest a banality to the occupants of old Olympus' thorny tops?

The alternative of enlarging the curriculum has occurred to many of you as it has to Doctor Sigerist.<sup>4</sup> This represents the most certain and expeditious manner of introducing such important material to the student of medicine which he now fails to receive, learning which will be everlastingly useful to him in dealing with the commodity of his market, which as all physicians know (but sometimes forget) is people. I needn't tell you what this material should be, I am sure you have read the arguments of educators with even less of an axe to grind than I. The danger of course is that it will be all addition, without the synthesis so lacking in the curriculum now in vogue, for which semantic juggling will not do. Possibly such terms as vertical and horizontal, originally tools of mechanics and geometry, might better be left there, somehow they remind me of epicritic and protopathic which for so long got in the way of another field of experience. Such creations, made in all innocence, sometimes take on a life of their own and become the rulers of the mind.<sup>5</sup>

We must steadfastly insist particularly by precept rather than by words, and in a manner to arouse minimally the hostility that delays, that the student of medicine be allowed to experience those things which will best prepare him to deal with people, people who are to all intents well, no less than those who are ill. In this task the teacher must submerge his considerably narrower interests to those of the student, and respect his eventual function as a physician. It is quite to the point that the student become a happy physician, since we are not a group inclined to quarrel with Spencer's observation that "happy people are the greatest benefactors of society." The physician whose patients' complaints are Greek to him cannot but be unhappy.

To be able in Greek, it is not sufficient to introduce several nuances of it haphazardly to a student as he is straight-jacketed through a curriculum. Neither is it a matter of simple addition. Greek to be intuitive must be diffused through living, one must be familiar with and be able to think in its idioms as well as its simpler declensions. If this is so, and I believe that it is, understanding of the behavior of well and ill people, which would appear to us to be of such moment, eventually must involve little short of change in the entire philosophy of the medical curriculum.

How may we encourage the evolution of a better curriculum? As I have already hinted probably by nothing so much as putting our own house in order. Steps in this direction might be the dispassionate display on morbidity in the

manner of Halliday<sup>6</sup> who has not compromised his case with massive incorporation. Probably it is significant that I have been singularly successful in interesting colleagues to say nothing of students of medicine in his papers.

Secondly we may influence such change for the better by handling expertly for our students and colleagues those more common disorders which the physician encounters every day in his practice. The teacher of medicine should always experience the care of and more important the responsibility for ill people, the most effective means by which he may be encouraged to put first things first. Too often the teacher is divorced from private practice, a most grievous deficit, for which his consultative work and the occasional ward walks may never substitute. Many incongruities in clinical teaching may be mitigated, I am certain, if only the teacher will be entirely responsible for a few of the ill; then at least clinical teaching has the opportunity to be living besides theoretical, and to become integrated into the social structure of the times.<sup>7</sup>

Despite all the discussion that goes on about the medical curriculum realistic consideration tells us that it would be practically impossible to accomplish quickly such major changes as would involve philosophies. One need only run over in his mind's eye the faculty in any of our schools of medicine to realize how true this is. On the other hand, it should be just as obvious that philosophies may not be established by surgical methods.

In medicine as in much of endeavor we are in an era which has put too much faith in factual information, which is fine for radio programs and the vagaries of "economism" but of no use in the business of living. As has been so often pointed out, we do not seem to know what any information means, it clutters our brains and distorts even the simplest observations of our senses. A primary defect in the medical curriculum now in vogue is that there are too few teachers who are aware of the relationship of their extremity of information to the body of knowledge. Integration and synthesis are not occupations for the immature in mind and spirit. Therefore, it follows quite naturally that the student in search of a general medical education is frustrated.

Cardinal Newman<sup>8</sup> in his wonderful essay, "The idea of a university," has never been surpassed in depicting the nature of synthesis: "That only is true enlargement of mind which is the power of viewing many things at once as one whole, of referring them severally to their true place in the universal system, of understanding their respective values, and determining their mutual dependence. Thus is that form of universal knowledge . . . set up in the individual intellect, and constitutes its perfection. Possessed of this real illumination, the mind never views any part of the extended subject matter of knowledge without recollecting that it is but a part, or without the associations which spring from this recollection. It makes everything in some sort lead to everything else; it would communicate the image of the whole to every separate portion, till that whole becomes in imagination like a spirit, everywhere pervading and penetrating its component parts, and giving them one definite meaning."

The physician who is in possession of the newer knowledge about emotional

illness and who usually is a psychiatrist may find himself insulated within the school or hospital for any of a number of reasons, not necessarily of his own making. His efforts are accordingly ineffectual. Though I cannot tell how to do it since local conditions vary, we should ever be alert for potential interest from members of other departments. Such may be found in any medical group if my experience may be trusted in this regard; in this endeavor the student of medicine is an invaluable ally. This small nucleus then should be shepherded quite unofficially; certain meetings and discussions, and even more important, significant writings may be brought to bear unobtrusively. In other words, the discipline may, as I see it, be nurtured informally among a group of medical friends, all the while keeping a weather eye out for worthy recruits. Some of us may be surprised at the representation of the specialties among those interested in the emotional aspects of disease, others of you know all about it. If success has crowned this endeavor the remainder of the teaching body should be allowed to slumber for the nonce, since you may be easily tempted to bite off enough to upset digestion. One may be drawn into the political vortex before he is aware of it.

The fluid rules of psychological medicine may not be established by ukase or fiat; if they are to have permanence I am convinced that they must evolve and not revolt. They must permeate the body, not an extremity of medicine. At present there is little other realistic means of accomplishing this besides via existing faculties of medicine, never for a moment discontinuing the very great moral support of the student. Despite the pessimism of those who appear unable to find the good in any man, I have more than once witnessed the inception of the method I have described. As is usually the case, the method is acceptable inversely as the recipient has aged, when prepossession is at a minimum and a new idea has the maximum chance of entrance to an unpreoccupied mind. Psychiatry and psychosomatic medicine to have health must be enunciated and practiced by physicians other than psychiatrists. In the medical school psychiatry may not be ensconced for any reason behind drawbridge and portcullis in an ivory tower somewhere on the campus but nowhere in the curriculum. Psychiatry must be practiced in the environment of the ill, wherever that may happen to be, medical curricula to the contrary notwithstanding.

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## The Tennessee Four Quarter Plan After Eighteen Years

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In 1925, public spirited citizens of Tennessee were alarmed by the state's annual net loss of one hundred physicians. Each year since 1916, the number of physicians graduated had been reduced sharply. Nearly all of the younger physicians were going to the cities. Most of the new medical students were coming from the cities. Advancing entrance requirements and the general poverty of rural areas had made it difficult for young men in these areas to qualify for admission and accumulate the funds needed to finance four years of medical study.

The Tennessee Four Quarter Plan was one of several measures devised by the faculty of the College of Medicine for the general purpose of training more physicians with the limited resources which the state was able to appropriate to the university and promoting a better distribution of graduates to rural areas. In 1927, the trustees of the University authorized the faculty to develop detailed plans, and, in July, 1930, the program was placed in operation. It has been in continuous operation since.

Now, there is substantial public opinion that a serious shortage of physicians exists again—not only in Tennessee but generally—and that the scarcity of medical service is most acute in rural areas. The widespread demand for more medical service and the tremendous surplus of qualified applicants for admission to medical schools are putting heavy and increasing pressure on the schools to increase production of doctors. It is timely, therefore, to examine the Tennessee Plan of medical school operation and review the results which it has accomplished. It is possible to estimate accurately the plan's major advantages and disadvantages and to determine with assurance whether such a pattern of medical education is an effective means of increasing promptly, at minimal cost, the number and the quality of medical graduates.

The Tennessee Four Quarter Plan is distinguished by these two unique characteristics:

1. Freshman (first quarter) students are admitted in four classes of equal size during each calendar year, at quarterly intervals, and
2. Each course of the curriculum is given each quarter of the calendar year.

As conceived in 1930, it was anticipated that these two features alone would accomplish the following objectives:

1. Enable students to interrupt their medical course on a very flexible basis. Thus it was hoped to encourage enrollment of students who were self dependent or who could expect very limited support only—especially students from rural areas. Such students could withdraw from school at the end of any quarter for a reasonable time to earn new funds. Likewise, students compelled to withdraw on account of illness could return at the beginning of any quarter. Other students, retarded for scholastic reasons, might repeat one quarter and gain a firm foundation for advancement without losing a year's time.

2. Insure a better distribution of graduates to rural areas as a consequence of enrolling more students accustomed to life in rural areas and tied to these areas by sentimental attachments and financial advantages.

3. Enable students with adequate support to complete the standard medical training in three calendar years.

4. Improve the quality of instruction by having instructors teach smaller classes.

5. Improve both the sequence and the correlation of instruction by removing the necessity of "rotating" student sections without logical sequence through outpatient and ward services.

6. Avoid the dislocation of hospital services consequent upon long summer vacations.

7. Obtain the best possible returns from the resources available to the university by the maximal use of the physical plant, the scientific equipment, and the services of administrative, clerical, technical, and custodial employees—thus conserving, as much as possible, for investment in faculty.

The Tennessee Plan requires the subdivision of the curriculum of instruction into "courses," each of which will extend through one quarter only. Such a "course" may consist of one lecture weekly or of lectures, laboratory periods, demonstrations, or ward services totaling sixteen or more hours weekly. If the volume of instruction in a subject is too great to be compressed into a single quarter, or if it should be prolonged in order to secure better correlation with instruction in a related subject, it is organized into a series of two or more "courses." Thus bacteriology is given in a single "course," physiology and biochemistry each in a sequence of two "courses," and anatomy and pathology each in a sequence of three "courses."

The courses thus established are grouped to form a curriculum of twelve quarters. In arranging the courses, we have been guided by the following principles. The student's load has been held to about thirty (clock) hours weekly. The courses presenting a given subject are arranged in a logical sequence and in a continuous series. The presentation of general or fundamental subject matter by lectures or similar means is arranged so as to precede immediately the study of selected material in laboratories or of selected cases in the hospitals. Courses presenting related subject matter—which complement each other—are given as nearly synchronously as possible.



These principles conflict at times, and it has been necessary to make compromises. Most of the changes in the curriculum during the past eighteen years have been made in efforts to secure the best sequence and best correlation of courses.

A second essential feature of the Tennessee Plan is that all students shall take the "courses" in the same sequence. Otherwise the efforts to secure the best sequential arrangement and the best correlation of courses are frustrated. This is possible only if the number of students admitted at a given time is limited to the number that can be taught simultaneously in laboratories, the outpatient services, or the hospital services. The limiting factor in our college was the hospital services. We could teach about thirty students at a time on each service. Consequently, the number of students admitted at a given time was limited to thirty, and the number taking each course was approximately thirty. (Under the pressure for admission that developed during the war period, this number was increased to and still remains at thirty-five.) If the number of students that could progress simultaneously through the courses were less than twenty, the program would become uneconomical as the ratio of teachers to students would become too high.

The improvements in the curriculum that follow elimination of "rotation" and the dislocations consequent to it may be achieved whether students are admitted once annually, or twice, or four times, as long as the number admitted at a given time is limited to the number that can take each course simultaneously.

Only under the Four Quarter Plan of admissions (which, of course, adds a standard summer quarter to the three quarters that constitute the conventional academic "year") is it possible to make maximal use of the physical plant, the scientific equipment, and the services of personnel employed in administrative, clerical, technical, and custodial activities. We have been able to admit one hundred and twenty students (one hundred and forty temporarily) annually although classrooms and laboratories accommodate only thirty (thirty-five). Thirty (thirty-five) sets of laboratory equipment have been adequate instead of four times as many. (The equipment is used four times annually instead of being used one quarter and stored three, but its life is not proportionately shortened.) The cost of subsidiary personnel is not increased by the summer quarter.

Generally, the first and most weighty objection which is cited against the Four Quarter Plan is the apparent quadrupling of teaching load. Actually, although each course of the curriculum is repeated four times annually, only the lecture or didactic fraction of total teaching load is quadrupled. When students are admitted in groups of sixty or seventy-five or of one hundred and twenty or more, the usual sizes of classes admitted in North America, extra teachers are assigned as laboratory instructors or as instructors in the outpatient department or on the wards in such numbers as to provide about one teacher to every twenty to thirty students. In 1930, our curriculum consisted of about



four thousand hours. Of these, about twelve hundred were lectures. When this volume of instruction was arranged in courses with the same total of hours and the same number of lectures, and each course was given four times annually, the teaching load was increased 30 per cent only. Of course, if classes should be admitted twice or three times annually, the percentage of increase would be less. However, under such circumstances, the fixed, overhead charges would not be exploited fully.

When we first began to operate under the new plan, we increased the number of teachers by about one third, thus maintaining about the same average teaching load as before. During the past eighteen years, the total teaching load has remained essentially unchanged, but the number of teachers has been increased greatly with substantial reduction in individual teaching load. Individual teacher load has no causal relationship to the Four Quarter Plan. The substantial reduction in average teaching load of our faculty is referable to the very greatly increased interest in medical research and diversion of energy to this activity. Average teaching load is only a relationship between total teaching load and number of teachers. It varies from college to college whether on the Four Quarter Plan or not, and it fluctuates with the resources of the college and the availability of teachers.

In envisioning the Four Quarter Plan we accepted the desirability of maintaining the traditional three quarter basis of academic employment which allows the teacher a large measure of freedom from academic responsibilities during the summer. From the beginning, our faculty have had no obligation to teach during the summer quarters and have not been allowed to do so more often than alternate summers. Our teachers who elect their biennial opportunities to do summer teaching receive a proportionate fraction of base salary as additional compensation. Other summer teaching staff is composed of visiting teachers; one of the extra dividends of the Tennessee Plan has been the stimulus furnished by these summer visitors from other institutions.

Although teaching loads of our faculty have been reduced rather than increased under the Tennessee Plan, it has not been possible to avoid the imposition of additional administrative responsibilities on heads of departments. This is not peculiar to our situation. Nevertheless, some of the problems associated with selection of new staff members and departmental employees, inviting the summer staff, organization and direction of the teaching program, the steady expansion of graduate and postgraduate instruction are definitely increased under the Four Quarter system.

A disadvantage of our plan which was not foreseen was its exaggeration of the tendency for students to "learn and forget." Foreign critics have charged that American medical colleges generally stimulate students to "learn too much and know too little." To counteract this tendency, our faculty has inserted a "review quarter" followed by a comprehensive examination between the pre-clinical courses and the clinical courses.

After the completion of the first six quarters, students are required to interrupt their course sequence for one quarter. Before readmission to the seventh quarter, they must sustain a comprehensive examination on the basic sciences. The purpose of the examination is to force students to make a careful review of the basic sciences before beginning the clinical studies.

The comprehensive examination is in three parts: anatomy, histology, and embryology; chemistry, physiology, and pharmacology; and pathology and bacteriology. The examiners are drawn from the clinical faculty. Examinations are oral. An important by-product of the examination has been better correlation of basic science and clinical teaching. Another by-product has been improved records of graduates on licensing examinations.

Before 1940, about 70 per cent of our students completed their training without interruption (except the review quarter). The remaining 30 per cent remained out of attendance one or more quarters. Some of these interrupted their training on account of health, some on account of scholastic difficulties, and some for financial reasons. Presumably, many of these men would not have been able to complete their training or would have been impeded seriously in doing so under the single annual admission system.

Since students are admitted quarterly, they are ultimately graduated four times annually. The arrangement of commencement programs quarterly adds a considerable burden to the faculty and the administration.

Since most hospitals admit interns in July only, graduates of the university frequently find themselves at a disadvantage in securing the internships of their choice. However, about one third of our graduates take their intern training in Memphis hospitals. These hospitals admit their interns at monthly or quarterly intervals and have a graduated program of intern training instead of the usual program of rotation. This is a definite and considerable advantage to the hospital. The intern's training can be arranged in the best possible sequence and each intern will follow this sequence. At no time will the hospital have more than a minimum of new interns.

While the foregoing and probably other more or less important objections can be brought to bear against the Four Quarter Plan, in our experience the advantages far outweigh disadvantages.

In the first place, the original main objective of the program was realized to a gratifying degree. During the early 1930's, enrollment of students from rural areas was increased greatly; the total number of graduates was increased; and the proportion of graduates entering practice in rural areas was markedly increased. By 1940, the shortage of physicians in the state was overcome in nearly all areas. Entire credit for this certainly did not belong to the Four Quarter Plan, but it was a vital factor in the improvement accomplished.

We believe that standards of promotion have been improved as a result of the quarter system. As already observed, students who make a poor start can be required to repeat a quarter without too much loss of time or increase in

expense. After repetition, they can proceed with a better foundation or be refused further training. Since the hardships involved are less, the faculty tends to maintain stronger standards.

We believe that health conditions among students are improved by the quarter system. Each student is given a physical examination on admission and annually thereafter. If serious illness is detected, or if the student becomes ill later, he may withdraw and, if recovery is prompt, may resume his study without losing a year. Under such circumstances, the student more readily withdraws when ill or may be the more readily required to withdraw by the faculty.

Our faculty believes that the quality of instruction has improved on account of the quarter system. The whole curriculum is so arranged as to give the best sequence and the best correlation that can be achieved, and each student progresses through the same sequence of courses. The small number of students in each course promotes better relations between students and teachers. Teachers promote and graduate students with greater confidence under such circumstances.

Although instruction continues through four quarters annually, there remain two weeks of vacation at Christmas and four weeks in the summer. This proves to be enough for most students.

Definite advantages have accrued to our teachers under the Four Quarter Plan. While the amount of time available for research is not necessarily related to the quarter system, the plan lends itself readily to freeing teachers from routine teaching for definite periods of research. Since junior staff members must be assigned full responsibility for courses, they must possess a good degree of maturity. Thus, the Four Quarter Plan has compelled the staffing of all departments not only with more teachers but with teachers whose average competency and experience as instructors and investigators is well above the requirements under a "once-a-year" plan of student admission. Since a larger percentage of our teachers are capable of conducting independent research programs, more graduate students can be accommodated. Research productivity and graduate student training are reciprocally stimulating. We are convinced that the Four Quarter Plan has been mainly responsible for the large increase in these activities in our school.

On the whole, our trustees, our faculty, our students are highly pleased with the results of the Tennessee Four Quarter Plan. We have been able to train a maximum number of physicians with the resources available to us. The training of undergraduate students has been improved. Research has been facilitated. Average faculty income has been improved. Students have been able to alternate earning periods with study periods when necessary and have saved six months when funds available to them have been adequate.

The Tennessee Four Quarter Plan is adapted especially to meet the emergency now facing American medical colleges. With minimal changes of the physical plants and equipment, greatly increased admissions become possible, and more physicians can be made available to the country promptly.

## The Contribution of the South Dakota Basic Science School to the Physician Population of Its State and Area

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A number of surveys<sup>1</sup> have shown the contributions that medical schools have made to the physician population of a given city, state, or geographical region. I am not aware of any published data on the role played by basic science schools in terms of their contributions to the physician population of the given states concerned. Do the graduates of a two year school, on completion of their medical course of study at a four year school, tend to return to practice in the area of the former school? This, and related questions, have been partially answered by determining (1) those medical schools accommodating the graduates of the South Dakota School of Medical Sciences and (2) the eventual area in which these graduates practiced medicine. Further, additional data on related subjects, as herein reported, have been accumulated to ascertain the contribution of the South Dakota School of Medical Sciences to medical education for both the state and neighboring areas.

*Residency of Students Attending South Dakota School of Medical Sciences.*—Six hundred and forty-six (646) students have graduated from this school since its founding in 1907. Four hundred and thirty-six (436) students were residents of South Dakota, for an in-state percentage of 67.49 (Table 1). Residents of the neighboring states of Minnesota and Iowa show a combined registration of about 10 per cent, or 69 out of 646 students. Six additional states, none of which are from the great plains or north central area, have each contributed more than 1 per cent to the total out-of-state registration.

The present in-state registration is somewhat higher than the average figure given above (67%). Classes from 1946 to 1948 inclusive show an in-state residency percentage of 71.1 with the entering class of 1948 exceeding all others (83.3%). Two factors are primarily responsible for this increased registration of in-state students. First, the past three years (1946-1948) have shown an over-all decrease of 10 per cent in numbers of South Dakota freshman medical students enrolled in schools of other states as compared with the prewar years of 1938-1940.<sup>2</sup> Secondly, there is an increased demand for medical education. South Dakota ranked twenty-seventh in the nation for the academic

1. DAVISON, W. C.: Medical education and the distribution of physicians and hospitals in the South. *J. A. A. M. Colls.*, 18:118-125, 1943.

LASSEK, A. M.: The role of the New York state medical schools in the national distribution of physicians. *J. A. A. M. Colls.*, 19:352-359, 1944.

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2. HAMILTON, C. H.: Distribution of medical college students by residence. *J. A. A. M. Colls.*, 21:33-38, 1946.

year 1946-1947 in number of freshmen medical students on the basis of population,<sup>3</sup> while last year it ranked seventh from the top.<sup>4</sup> It seems apparent that more qualified students are desirous of studying medicine and, in lieu of accommodations elsewhere, are presently able to pursue such a course largely through the maintenance of the basic science school. Perhaps it is more than mere coincidence that the majority of those states without medical educational facilities of any type have the lowest ratios of medical students to population.<sup>3,4</sup>

TABLE 1.—ANALYSIS OF RESIDENCY OF STUDENTS ATTENDING THE SOUTH DAKOTA SCHOOL OF MEDICAL SCIENCES.

State	Number	%
South Dakota	438	67.49
Iowa	51	7.89
Minnesota	18	2.78
New York	15	2.32
Illinois	14	2.16
California	13	2.01
Ohio	9	1.39
Pennsylvania	9	1.39
Washington	8	1.23
Others	73	11.30
Total	646	99.96

*Transfer of Students.*—A total of 633 students have been transferred to 53 medical schools on the completion of the basic science course at the University of South Dakota (Table 2). More than two-thirds (67%) of the total number have through the years been accommodated in seven schools, as follows in numerical order: Rush, Northwestern, Washington University (St. Louis), Nebraska, Creighton, Temple and Illinois. It is to be noted that all but one of these seven schools are located in the north central area (midwest and

TABLE 2.—SCHOOLS CONTRIBUTING MORE THAN 1 PER CENT TO THE PHYSICIAN POPULATION OF SOUTH DAKOTA TOGETHER WITH THE NUMBER OF STUDENTS TRANSFERRED TO AND RETURNED FROM THESE SCHOOLS.

School	Students Transferred	%	Students Returned	%	Non-S. D.	M. D.'s in S. D.	%
Northwestern	84	13.2	17	20.2	37	54	11.9
Rush	174	27.7	23	13.2	29	52	11.5
Creighton	32	5.0	5	15.6	43	48	10.6
Minnesota	13	2.0	0	0.0	43	43	9.5
Illinois	30	4.7	7	23.3	30	37	8.2
Iowa	14	2.2	2	14.3	29	31	6.9
Nebraska	35	5.5	2	5.7	15	17	3.8
Temple	32	5.0	9	28.1	1	10	2.2
Washington U.	41	6.4	4	9.7	3	7	1.5
Tennessee	14	2.2	4	28.5	2	6	1.3
Others (43 schools)	164	25.9	13	7.9	132	146	32.3
Totals	633	99.7	86	13.5	365	461	99.7

plain states) and more than one-half (56%) of the total number of transferred students have been accommodated in medical schools within the environs of Chicago and Omaha.

3. Medical Education in the United States and Canada. *J. A. M. A.*, 134:1299-1425, 1947.

4. *Ibid.* 137:25-75, 1948.

*Schools of Origin of South Dakota Physicians.*<sup>5</sup>—A total of 451 licensed physicians are recorded on the present state registry. The degrees obtained by this group originated from 76 medical schools. Seven of these schools are foreign and two Canadian schools are represented. A total of 19 of the 451 physicians graduated from 9 schools which presently are extinct. In addition a total of 46 physicians were graduated from 12 schools which have subsequently merged with existing medical schools.<sup>6</sup> Nine schools have contributed 1 per cent or more to the physician population of the state (Table 2). Five schools have graduated one-half of the total number of physicians in the state, namely, Northwestern, Rush, Creighton, Minnesota and Illinois.

Eighty-six, or 19.1 per cent, of the 451 South Dakota physicians, graduated from the basic science course at the University of South Dakota. On the basis of the total number of students transferred (633) this return of 86 students to the state is only 13.5 per cent. On the basis of residency, since 67.5 per cent of the matriculants were from South Dakota, there is a net return of 19.7 per cent of native students.

This is quite an unfavorable average return when compared with four-year medical schools. The data of three surveys,<sup>7</sup> based on 23 medical schools, indicate an average of 67 per cent of the graduates remain within the state with percentile ranges from 18.7 to 85. It is likely that the national average, for all schools, would be above 50 per cent.

It is self evident that South Dakota is heavily dependent on medical schools in adjacent states for its supply of physicians (Fig. 1). The present physician population ratio is about 1:1,500. This is computed on the basis of 600,000 population and that of the 451 physicians some 14 are retired, 29 have only part time practice, and 16 are employed by institutions of the state. The physician population ratio of 1:1,500 is probably too low for as of 1946 over one-fourth of the physician population was 65 years of age or older<sup>7</sup> and corresponding restrictions in practice would be expected. This high age factor and subsequent high replacement rate would permit a 100 per cent return of the average graduating class of 25 and without improving to any degree the physician population ratio. Indeed, the last four years (1945-1948 inclusive) have accumulated more than one-fourth of the total physician population of the state (451) with an immigration of 135 physicians. Of this number, 27 per cent were South Dakota graduates for a return of some 8 per cent above that existing in the total physician population of the state (see above). There is optimism for the belief that this favorable trend may be continued. This is due largely to the offering of internships in the state for the first time, and the introduction of a clinical clerkship or preceptorship training introduced by the School

5. I am sincerely grateful to Dr. G. J. Van Huevelen, Superintendent of the South Dakota State Board of Health, for providing much of these data.

6. Rush Medical College is included in this group. However, since this school contributed so extensively both to the physician population as well as in numbers of transfers accepted (Figure 1) it has seemed desirable to retain its identity for purposes of this paper.

7. Medical Care and Health Facilities in South Dakota. Report of the S. D. State Health Committee, 1946.

of Medical Sciences.\* Both of these educational features serve to acquaint the student with opportunities for general practice within the state.

*Distribution of Physicians Who Attended the South Dakota School of Medical Sciences.*—Addresses are known for some 287 physicians or 55 per cent of the number of graduates during the period 1907 to 1941. Graduates since 1941 have been excluded as it is unlikely that the majority of addresses for this group can be considered permanent by virtue of displacements provoked by the war.

Seventy per cent (198) of the graduates remained in the same geographical area to which they transferred in completing their medical study (Table 4). Of this number 52, or 18.1 per cent of the total (287), remained to practice medicine in the same state in which the M.D. degree was received.

An examination of Table 2 indicates that 70 per cent of the graduates of this school have transferred to medical schools located in the north central area with 64 per cent remaining in this same area to practice (Table 4). The 6 per cent migration has been largely to the Pacific and Atlantic coasts (Table 4.) These latter areas contributed about 5 per cent by residence of our students (Table 1) so this migration probably represents little more than a return to home areas.

TABLE 4.—THE NUMBER OF SOUTH DAKOTA GRADUATES WHO ARE EITHER PRACTICING WITHIN THE SAME AREA (I) OR HAVE MIGRATED TO ANOTHER AREA (II) UPON RECEIVING THE M.D. DEGREE. THE LIMITS OF, AND STATES EMBRACED WITHIN, THE GEOGRAPHICAL AREA REFERRED TO ARE THOSE CUSTOMARILY USED IN ATLASES OF THE UNITED STATES. THE NUMBER OF STATES ARE INDICATED FOR EACH AREA.

Geographical Area	I	%	II	%
North Central (13) .....	185	64	23	8
Western (11) .....	5	1.7	40	14
Mid-Atlantic (5) .....	5	1.7	11	3.8
Southern (13) .....	2	1.7	7	2.4
New England (6) .....	1	.3	4	1.4
Military and Territories .....			4	1.4
Totals .....	198		89	

It is evident that the place of birth or home residency of the student plays an important role in the area selected for the establishment of a practice. Analyzing the data on this basis there has been only a 10 per cent migration out of the north central area. Thus, 81 per cent of the students of South Dakota School of Medical Sciences had a home residency within the north central area (Table 1) while 72 per cent have remained in, or returned to, the north central area to practice (Table 4). Indeed, one-third of the South Dakota graduates who completed their course of study in a medical school located outside of the north central area returned to this area to establish a medical practice (Table 4).

The percentage return in physicians to the north central area compares most favorably with other regions of the country. Thus, 79 per cent of the graduates of 23 medical schools in the Northeast and South have remained in their respective areas.<sup>1</sup>

8. SLAUGHTER, D.: Address read at the forty-ninth annual meeting of the Association of American Medical Colleges, November 10, 1948.



There are other lines of evidence to indicate the strong tendency of South Dakota students to remain in, or return to the home area. Creighton and Nebraska Medical Schools are located in an adjacent state and have accepted about the same number of South Dakota transfer students as have the more

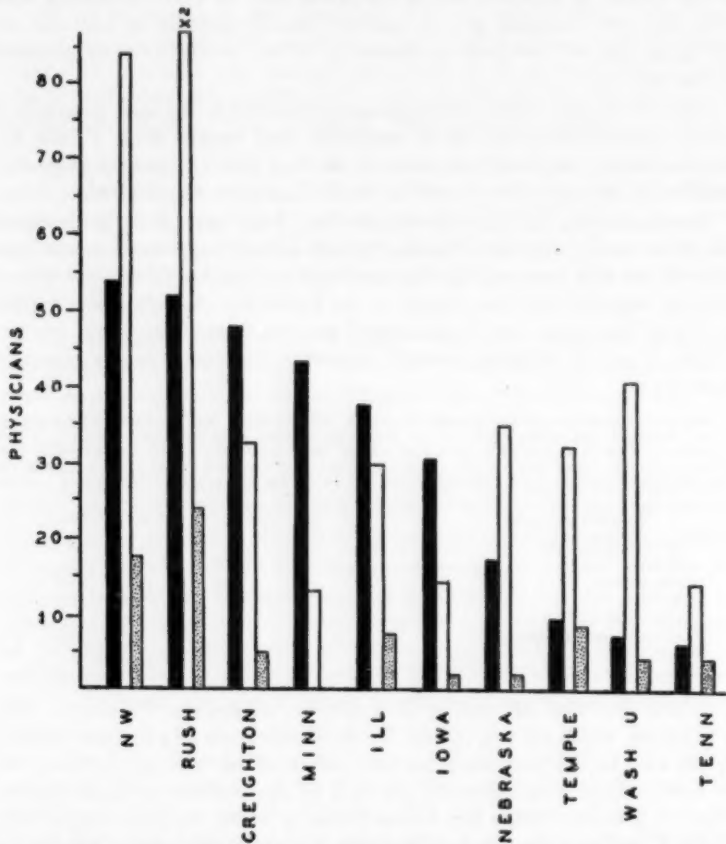


Fig. 1.—Medical schools that have contributed more than one per cent to the physician population of South Dakota (black), together with the number of South Dakota transfer students accepted (white) and the number that have returned to practice in the state (stipple). Refer to Table 2 for actual numbers.

distantly located schools as Temple and Illinois. However, about three times as many students have returned from Temple and Illinois as from the neighboring schools of Creighton and Nebraska (Table 2, Fig. 1). Two other neighboring states, Iowa and Minnesota, while accepting very few South Dakota transfers, show a combined return of 14.2 per cent, while Tennessee has a return of over 25 per cent from the number of transfers (Table 2, Fig. 1).

Schools in the neighboring states, namely, Creighton, Iowa, Nebraska, and Minnesota, have contributed 31 per cent of the physician population of the state. To be included in this number are certainly many South Dakota residents who have been admitted as freshman medical students and not as transfers from the South Dakota School of Medical Sciences. These schools have accepted 94 of our transferred students (15.4%) of which 9 have returned to South Dakota (9.5%). Such distant schools as Rush, Illinois, Northwestern, and Temple have contributed 33.8 per cent of the physician population. They have accepted 320 of our transferred students (50%) of which 66 (21%) have returned to the state. Again, the greater percentage of return is on the part of those students transferring to schools located outside of the neighboring states.

These data do indicate a possible contribution made by the School of Medical Sciences to the physician population in adjacent state areas on the assumption that at least 50 per cent of the graduates of the four-year school remain within the state.<sup>1</sup> Thus, if only 1 out of 10 South Dakota transfers return to the state from neighboring schools (Creighton, Nebraska, Iowa, Minnesota) a majority of the remainder are presumed to be practicing within the state areas represented.

#### SUMMARY

1. Sixty-seven per cent of all students enrolled in the South Dakota School of Medical Sciences have been residents of South Dakota. The post-war years are consistently above this average with a maximum of native enrollment of 83 per cent.
2. Six hundred thirty-three students have transferred to 53 medical schools. Two-thirds of this number have been accommodated in seven schools which follow in numerical order: Rush, Northwestern, Washington U. (St. Louis), Nebraska, Creighton, Temple, and Illinois.
3. About one-fifth (19.1%) of the 451 licensed physicians in South Dakota graduated from the School of Medical Sciences.
4. Fifteen per cent of the total number of students transferred from the basic science school have returned to South Dakota to practice. This figure has been nearly doubled (28%) during the past three years.
5. Three-fourths of the total number of students transferred are practicing in the north central area.
6. The schools which have made the major contributions, in terms of numbers, to the physician population in South Dakota are: Northwestern (11.9%), Rush (11.5%), Creighton (10.6%), Minnesota (9.5%), Illinois (8.2%), Iowa (6.9%), and Nebraska (3.8%).

## The Art of Medical Practice\*

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The practice of medicine is an art as well as a science. Our grandfathers knew more of the art of the practice of medicine than we do, perhaps, and, I fear, that we have unconsciously lost some of this art in our pursuit of the science. Do not misunderstand me, for I know that the vast advance in the science of medicine has given us the power to be infinitely better physicians; but we must not fail to keep the art of medicine, which enables us to apply our greatly increased knowledge of disease to the cure of the patient, whose character and reactions have not greatly changed during the passing of years.

We must, of course, have a sound scientific base. We must know anatomy, physiology, biochemistry, materia medica and so on, before we can learn to practice medicine, obstetrics and surgery. And we must take advantage of research to advance our knowledge. There must be a sound foundation beneath before a safe house should be built.

But you must learn to apply your knowledge of disease to the needs of the patient. Much can be learned from the study of "cases," but patients are much more than cases,—they are persons who are ill. We wish to free the person from the disease; i. e., destroy the disease and save the patient. The patient's mental attitude is of the utmost importance and should be studied carefully and corrected if possible. Sleeplessness, mental worry, fear, pain, despondency, discouragement, and so on, cause many symptoms and even real tissue changes. For the higher nerve centers to some extent control the sympathetic and parasympathetic systems, and these affect digestion, absorption, metabolism and muscular tone, as well as mental vigor. The skeletal muscle, exhausted by repeated contraction, may be made to contract many times more if stimulated by an electrical current which steps up or replaces the stimulation from the cerebral cortex; and a similar extra stimulation can be supplied by fear, excitement, encouragement from the doctor or other external mental factors. Distract the patient's mind from himself and his troubles. Mother Goose's "Little Tommy Grace had a pain in his face so bad he could not learn a letter. When up came Dick Long, singing such a funny song that Tommy laughed and found his face much better."

The Coué formula: "Every day in every way, I am getting better and better" is a stimulation coming from the patient himself. The Christian Scientist builds his cult on this and some part of his healing methods should be used by us.

"Mental healing" is not nonsense, but can be seen every day in the sick

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room or the wards, when the daily visit of the wise physician gives a boost to the morale of the patient and thus plays a large part in the cure.

"Man does not live by bread alone," neither is he cured by drugs alone, "but by every word that proceedeth from the mouth of God," or from the words and actions of the physician who has the God-given art of sympathy, understanding and encouragement.

The Prophet of old wrote: "Wisdom is the principal thing. Therefore get wisdom, but with all your getting, get *understanding*." Understanding includes not only understanding of the disease, but also of the patient. What are his mental reactions? Does he need to be soothed or scolded, prodded or restrained? Gentleness, thoroughness, patience, consideration of the patient's feelings, quietness, lack of the appearance of hurry or haste, thoughtfulness, sympathy in the broad sense, i. e., to feel or suffer or rejoice with another and thus understand his feelings or thoughts, symptoms and reactions: An interesting book, or toy—a cool pillow, a smoothed lower sheet, a bit of a story—anything to take his thoughts away from himself and his symptoms. Dr. Carpenter, who, many years ago, was Dean of this Medical College, was an adept at this.

Make use of all your senses, including common sense, than which there is nothing less common.

A sweet looking, healthy appearing woman once came into my office and with an ingratiating smile, remarked: "Oh doctor, I am in constant agonizing pain." I knew, of course, that she could not be and look and act as she did, but undoubtedly was one of those whose weakest adjective is the superlative and must be discounted about 90 per cent. But, at least, at first there must be the appearance of sympathy, which leads her to believe that you understand her condition and thus can relieve her.

Once in a large outpatient skin clinic, the professor called out to a new patient just coming before the class: "Stop right there at the door." Then, turning to the class, he asked: "Have you all been vaccinated? This patient has smallpox." Later, when the class asked him how he made the diagnosis without seeing the patient, he replied: "I smelt him." All your senses (as well as sense) can aid you in making a diagnosis.

At another time, I was called to Hardwick, Vermont, to operate on a child with intestinal obstruction. The child was asleep when I arrived, and I paused at the chamber door before disturbing him, to see what the sleeping child could tell me before he began to cry and struggle when awakened. He was breathing rapidly, well over 60 times a minute, which suggested pneumonia, and when I picked him up and percussed his flat chest, he promptly had a large bowel movement while in my arms. I am sure the family (who were foreigners) thought that I had cured their child by "the laying on of hands," but you know many cases of pneumonia do have intestinal stasis.

Another patient, a poor man with eleven children, and low pay, began to have periods of excitement, followed by extreme depression and despondency. A manic depressive? He was quite skillful with his hands, and a wise vocational

nurse suggested that he make fancy boxes in his spare time and sell them to help out his wages. This he did, and was enabled to sell all that he made at good prices. The extra money thus earned cured his mental condition. Worry, not disease, had unbalanced his mind. You will find patients that you could cure if you would pay off the mortgage on their house, or keep their wayward daughter from running around the streets at night, or get the husband a job where he is not nagged by his fellow workmen, or depressed by repeated failure to advance in his position.

As an intern, (many years ago) I was much impressed by a young man who had been brought into the ward totally blind. The ophthalmologist, after repeated examinations of the eyes, reported no organic trouble and the neurosurgeon failed to find any intracranial disease. Still, the patient could not see. A wise visiting surgeon, on his daily ward visit, stopped at the bed and within hearing of the patient explained to the House Officers that the man had a very peculiar and rare condition of the eyes which would be entirely cured at 11 a. m. on the tenth day following, under a certain treatment (which, by the way, consisted of boric acid drops at frequent intervals). Daily this same procedure was followed, with the same assurance that the man would be entirely cured in 9, then 8, then 7 days, and so on. On the morning of the 10th day, quite a group of doctors and interns gathered about the bed as the hour of 11 approached, and the patient was in a state of repressed excitement. On the stroke of 11, the surgeon thrust a newspaper under the patient's nose and commanded: "Read." And he read!

A miracle? Yes. Hypnosis? Perhaps. Faith cure? Certainly. But above all, the physician's knowledge that since the patient was sound anatomically, he could see if only he could be persuaded that nothing but his own imagination prevented such sight.

Out in South Burlington many years ago, they were rebuilding a barn, and a timber sill about 12 x 15 and many feet long was left on the ground. The little daughter of the farmer, playing around the yard, succeeded in rolling the timber over onto herself. Her mother was the only one near. She rushed out and in an agony of fear lifted the timber until the child crawled out, not badly hurt. But the next morning not one of the carpenters could lift the end of the timber at all. How could that mother, unaided, do what none of the carpenters were strong enough to do? Mother love and fear supplied that extra stimulus to her muscles, just as an electric battery might have done. We have seen the same things in the late war, when oftentimes men have done the impossible in the frenzy of combat.

I am telling this to show that while the higher nerve centers control voluntary action, and also to some extent involuntary action, these same centers may be increased in power by outside factors, and one of these factors is the power of the personality of the physician to increase in his patient the wish, the determination, the Hope to carry on—to recover. And Hope is a mighty factor in securing recovery. Never take away Hope from your patient. It is your

strongest ally, your most powerful medicine, for it aids all treatments of every kind. Fear is the opposite; patients can die of fear alone. And if you take away Hope, yes, if you merely lessen Hope, fear creeps in and destroys.

But do not be too cheerful. The patient knows that he is ill, perhaps thinks that the trouble is more serious than it really is. You must not be gloomy, but friendly, interested and hopeful, as well as helpful. Many of the patient's fears are groundless and can be explained away easily. Others are well founded and must be handled tactfully. Real pain must be mitigated, if possible. In chronic or long-continued illness, opiates are, of course, dangerous and habit-forming, but need not be so much feared in short or acute conditions.

Remember, that your prognosis is not infallible. You may be mistaken. The disease you thought beyond help may not actually be so. If you take away the patient's hope, he will probably give up the struggle, close his eyes, fold his hands on his chest and pass out. But if he can be made to feel that he has a fighting chance, he is more likely to fight and, perhaps, win.

In my early practice, I learned a lesson about mistaken prognosis. I sat by a child, desperately ill with pneumonia, for most of a night, and then went home for a few hours' sleep. When I returned early the next morning, I brought with me a death certificate partly filled out. The child was sitting up in bed and grinned at me. Of course, the child was not old enough to have been affected by my attitude one way or the other (and if he had been, I fear that it would have been to his harm). But I was impressed by how easy it was for me to be mistaken.

Another of my mistaken prognoses was in the case of a middle aged man, on whom I operated and thought I found cancer of the pancreas, with pyloric obstruction. I did a posterior gastroenterostomy to relieve his vomiting and told the family he would probably not live more than a few months. Since he was a poor man, his family began to receive financial aid from a charitable religious society. I had forgotten all about the patient when something more than a year later, the charitable society called me up, asking if they might not stop his monthly check since he had sold his farm and bought another, had buried his wife and married again, and seemed to be doing well on his new farm. A biopsy at the time of operation might have prevented my mistaken prognosis, but I remember thinking at the time that the whole field was so hemorrhagic that I feared uncontrolled bleeding if I excised a piece for biopsy.

Again let me insist that the more scientific knowledge you have, the better for you and for your patient, and that the more "research" that can be done, the better doctors will we all be (if we keep up with the times). Without such science and research, we would all be poor physicians, quacks, or charlatans.

But the purely scientific physician is sometimes a poor practitioner, for he looks solely at the disease and does not see the patient. He may know what drugs and the knife can do, but may fail to realize what he himself can do by impressing his calmness, hope and reassurance on the mind of the patient, to

soothe his worries, calm his fears, awaken hope and thus cause a determination in the mind of the patient to get well in spite of everything.

Patients like positive statements, frequently expecting more definiteness than we have the knowledge to give. Do not hesitate to ask for more, or repeated examinations; welcome consultation with other physicians. Do not be afraid to say "I do not know" (but do not say it too often). But when you have made up your mind as to diagnosis and treatment, after taking advantage of all scientific aids, be definite as to what, in your judgment, should be done. Never say "You might do this, or you might do that," for as the Psalmist wrote: "If the trumpet giveth forth an uncertain sound, who shall prepare himself for the battle." Give the patient positive instructions such as "Take this prescription for 5 days and let me see you again," or "This condition demands immediate operation, any delay increases the risk," or "You should have an operation. There is no great rush about it. You could take a week to get your business in shape to leave for a month, while you are convalescing so that you will not worry about your affairs, for that would delay your recovery."

But do not put off necessary treatment. A middle aged school teacher found a lump in her breast shortly before school closed in June. She had planned to go to Europe with her sister during the summer vacation. Both had set their hearts upon it, and had planned the trip for a long time. So she said nothing about the lump, went to Europe, and in October came to her physician for an examination. By that time the cancer was well advanced and in spite of a complete Halsted amputation and X-ray treatments, she lived less than a year. No doctor was responsible for the delay, but the trip to Europe cost her her life. In cancer, "Time is of the essence," as you know. Perhaps it is the one chronic condition where the time element is the most important factor.

There are many acute processes where delay has disastrous results also, but usually they have definite warnings, as to the rapidity of the process and the danger of delay. In making a diagnosis, the history plays a very important part, for it may show a probable cause. A woman in her 50's had a hard, slightly irregular lump in her right breast, which was somewhat tender, about one inch in diameter and adherent to the skin. She had noticed it for about 10 days and could give no reason for its being there. I made arrangements for her admission to the hospital to have the breast removed for probable cancer. But the next day, when I called to tell her of the arrangements, she said "Oh, Doctor, I forgot to tell you that just before I noticed this lump, I was housecleaning and a heavy picture frame slipped and fell, with its corner striking me in the breast. It hurt a lot, and the next day I found the lump." So we delayed operation for a week and the "cancer" disappeared. History gave the probable cause and the correct diagnosis.

I have told you of some of my failures in diagnosis, but a good history of the following case helped me to make a better guess. As I was operating at the Mary Fletcher Hospital, an intern reported that an elderly woman with a fractured hip had just been admitted. Rather sparring for time, I asked



"What's the history?" and the intern replied: "It's rather a queer one, for she says she did not fall but just slipped on her kitchen floor and twisted her leg." "Go back and examine her breasts, and then report to me," I said, and I went on trying to finish the operation before I had to set the femur. He returned shortly and said "She has a hard nodular bunch in one breast. How did you know?" I did not know, but I suspected it. "What is your diagnosis?" I asked. "Metastatic cancer," he said, and he was right.

Use your eyes. There are certain characteristic positions which are diagnostic, e. g., a child is sitting up in bed, holding his chin in the palm of his right hand, while the left hand holds up the right elbow. In other words, he is protecting his neck from the trauma of motion, especially flexion. You do not need an X-ray to make the probable diagnosis of tuberculosis of the body of a cervical vertebra. Nevertheless, you had better have such an X-ray, but meanwhile protect the neck by a Thomas collar or some sort of splint.

Or a man, having fallen from a load of hay, walks into your office, bending forward and to one side, with that arm hanging free. He obviously can not adduct it, or he would not lean over that way. It probably is not broken, else he would not let the arm swing,—he would hold it to his side to protect it from the trauma of motion. No, he obviously has a downward dislocation of the head of the humerus, subglenoid. You do not need an X-ray for the diagnosis, but it is better to have one, for there may be some further injury or fracture, but if you need further proof, just see how taut the deltoid is and how flat the shoulder.

The child with Pott's disease of the spine will squat, rather than bend to pick up an object on the floor, and then will climb up his thighs to stand erect again. So toss a penny on the floor and, perhaps, the child will make the diagnosis for you.

The sense of touch helps in recognizing the rigid abdomen, or the limited motion of joints, or the increased tension in an eye with glaucoma, or the cold extremities or the localized area of coldness in ischemia or the local symptom of "heat" in acute inflammation or its absence in chronic swellings. I knew one doctor who, although deaf, could map out "areas of dullness or flatness" in a chest by his sense of touch rather than by hearing. The rigid cord of a localized phlebitis and the crepitus in a fracture, or the fluid wave of ascites are other symptoms that our sense of touch detects.

Hearing tells many things about heart murmurs and chest rales among other things, so much so that even those with very acute ears make use of the stethoscope, and I suggest that you read Dr. O. W. Holmes' "Stethoscope Song" for whatever lesson it may teach you.

The "bruit" of an aneurysm and even the slight sound of a contracting muscle, the friction rub of pleurisy or pericarditis, all these and many more come to us through our ears, and some of them can be checked up or verified by our sense of touch.

I remember sitting beside a patient who was evidently near death following a "shock." The family were all near and every stertorous breath of the patient deeply affected them. They could not realize that the patient was unconscious. On turning the patient a little to one side so that her tongue did not fall back and partially close her larynx, the stertor ceased, the patient breathed quietly, apparently in a peaceful sleep until the end came. I have never had as much praise and thanks for a successful operation as from this simple act which meant nothing to the patient but so much to the family. On the other hand, some of your best efforts may bring nothing but fault finding and criticism, although you have done everything possible.

The Art of Medical Practice, thus includes the realization of the importance of data beyond that given by the microscope, the cardiograph, the X-ray, the chemical laboratory, beyond the solid facts of anatomy, physiology and pharmacology. After you are firmly grounded in these, you may safely reach out and try to interpret the thoughts, hopes and fears of your patient, and by the power of your personality, understanding, sympathy, precept and encouragement make the patient, like Kipling's immortal Mulvaney, who "began to think scornful of elephants."

If you can give a patient confidence that he will recover,—if you can relieve his pain and calm his fears and increase his hope, you will have so impressed his higher cerebral centers that they will react favorably on his entire organism, and thus make the difference between recovery and death.

If I may paraphrase another verse in the Book of Books, to apply it to the art of medical practice, I should say "And now abideth Faith, Hope and Charity, these three, and the greatest of these (in determining a favorable outcome for the patient) is Hope." See that you never by look, or word or action, deprive your patient of the inestimable benefit of Hope.

There is an old story of a medieval king who was ill for a long time. He sent for his astrologer, who told him that he would be cured if he wore "the shirt of a contented man." The king then sent out messengers and heralds to find a contented man, and to bring back his shirt for the king to wear. Many came back unsuccessful, but finally one herald returned and reported that he had found a contented man. "And did you bring me his shirt," the king asked. But the herald replied: "The man was asleep in a ditch under a hedge, and he had no shirt."

Likewise, you will find that it is difficult and often impossible to bring to your patient those qualities of mind and spirit that are so necessary if you are to be able to cure him. But never give up trying. If the patient welcomes you gladly when you enter his room, if he hangs on your every word, if he looks forward eagerly to your next visit—you are in a position to do him great good or great harm, depending on what sort of message your presence, actions, expressions and words bring to him. See to it that that message be one of Hope, comfort, encouragement and cheer.

## Tropical Medicine Education

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"Medicine in the Tropics" and "Tropical Medicine" have quite different connotations. The former embraces virtually all that is known of medicine; the latter implies knowledge extra to and beyond what is usually taught to the student in medical schools in north temperate climates. However, it postulates not only extra knowledge but a new and different point of view in its application. The extra knowledge is mainly concerned with animal parasites and arthropod vectors as well as diseases associated with a hot climate. The new point of view lays much greater emphasis on communicable diseases and their prevention, on laboratory diagnosis and specific therapy.

"Medicine in the Tropics," accordingly, means "ordinary" medicine plus "tropical" medicine. In most medical schools, until recently, the curriculum was limited to ordinary medicine. The movement of the second world war into tropical areas and the advent of the aeroplane, made it obvious to the leaders in medical education that "ordinary" medicine could no longer limit itself to diseases originating only in temperate climates, but must take cognizance of those originating abroad as well. A course dealing with exotic diseases was, accordingly, added by most, but by no means all, medical schools. In some cases this was superimposed on existing parasitological courses; in others, it was started *de novo*. In practically all cases it was, and because of time limitations probably will remain, an orientation course drawing attention to the more important communicable diseases contracted abroad. Courses of this nature were given in a few medical schools before the onset of the second world war and some predated the first world war. However, in no case were they regarded as satisfactory for men who would practice medicine in tropical countries. Such men required much more than could be given in the overcrowded undergraduate curriculum, and postgraduate instruction was the only answer.

Now it is universally accepted that the aim of the undergraduate medical curriculum is to turn out a medical practitioner; the aim of a postgraduate course in tropical medicine must be to supplement this course to such an extent as to turn out a man qualified for general practice in the tropics. This implies, however, an extensive laboratory course as well as a greater than usual proportion of preventive medicine. Such a course is obviously best given in a temperate or near temperate climate. That immediately creates a new difficulty in the provision of adequate clinical teaching material.

There is no real difficulty in the laboratory, and laboratory animals can supply diagnostic material which will substitute adequately for training purposes. People sick from tropical diseases are a different problem. In the old

days, chronic or relapsing cases were seen quite frequently in north temperate climates. With advances of chemotherapy, these become progressively fewer and, while the aeroplane will to some extent remedy this, the supply is unlikely ever to be adequate for real clinical teaching. Most cases which do come north, come to ports and so the earlier schools were established at great sea-ports—like London and Liverpool, for example. The Liverpool school preceded the London school slightly, but both taught in essentially the same way. The London school was the child of Patrick Manson; it was opened formally in 1899, although Manson began his teaching four years before that, in 1894. The course of instruction lasted for three months. Laboratory instruction was about equally divided between protozoology, helminthology, entomology, and bacteriology-pathology. Clinical lectures were given daily and tropical hygiene was added towards the end of the course. There was little or no correlation between the main laboratory subjects and even less between them and the applied portions.

With the absorption of the old school into the London School of Hygiene and Tropical Medicine, under the direction of Andrew Balfour in 1923, there was some alteration in teaching methods. The course was extended to about five months; more time was allocated to each subject, but teaching was still in the "block" system and the laboratory subjects were still taught independently of each other and of the clinical subjects. There were, however, two innovations—each subject had a tutorial or revision week added to its normal teaching time and the pathology of the various parasitic diseases was taught in the medical zoological classes.

Balfour, it is true, was not satisfied with this plan, although he was unable to make more than minor alterations in it. In 1927, accordingly, he read a paper on the education of medical officers for service in the tropics, in which he proposed a new plan of teaching, one involving a horizontal, rather than a vertical method of approach, and with more emphasis on tropical hygiene. In it, he classified students as of two kinds—those who had and those who had not, been in the tropics. He believed that the latter group should attend a short, intensive course on the essentials of tropical medicine before going abroad. Such a course would commence with microscopy and haematology, would proceed to malariology and thereafter to other branches of the subject. In his study of malaria, however, the student would be interested in both laboratory and clinical aspects; he would be instructed in methods of infection and would study mosquitoes and methods of control. Malaria would introduce him to protozoology and to entomology. From there, in due course, the student proceeded to the other big protozoal diseases—trypanosomiasis, leishmaniasis, amoebiasis—and their vectors, and then to the main helminthic infections and their vectors—arthropods, snails, fish, and so on. His plan was synthetic, and was based on clinical and preventive medical ideas, rather than laboratory ones. He suggested that teaching for such a course should employ two main teachers (with assistants and demonstrators), one clinical, one laboratory. Such a course

would occupy some three months of intensive work and would, as I have said, be devoted to essentials. At the conclusion of the course, the student proceeded to the tropics.

For those who had had clinical tropical experience, Balfour recommended the existing twenty-week course of the London School of Hygiene and Tropical Medicine, although he believed that a somewhat longer time than twenty weeks should be devoted to it. Of this course, only some thirty-five hours were given to tropical hygiene, which could well be extended to three months. He felt, also, that men in the tropics who would carry out public work should have even more instruction, especially in the laboratory, and in the principles governing hygiene. This course is, of course, analytical rather than synthetic but to men who had previous experience in tropical disease this need be no drawback.

The teaching of tropical medicine (apart from undergraduate instruction) was carried out at comparatively few centers before the war. In the British Commonwealth, there were civilian schools at London, Liverpool, and Edinburgh, in the United Kingdom, and at Calcutta, Hongkong, and Sydney in the east. There was no school of tropical medicine in Canada, although Todd, while professor of parasitology at McGill, had commenced in 1906, a course in tropical diseases in the medical school, and I had followed this in 1933, with one on North American parasitology.

The war made it necessary to provide in Canada a more extensive training for service medical officers, and for several years during the war we operated a three months' course in tropical medicine (with special reference to the war areas). We had adequate laboratory facilities at the Institute of Parasitology as well as a reasonable amount of teaching material (although we were more than grateful to the parasitology and pathological distribution schemes set up by the United States Army). We had the anticipated difficulty in providing clinical material. This we overcame by flying our students to Trinidad and British Guiana, after three months of laboratory instruction and systematic lectures in Canada. In British Guiana, for about four months, they attended the colonial hospitals and the Aluminum Company of Canada's hospital in British Guiana.

Each student was allotted a ward and, under the senior physician, was in complete charge. He kept his own case histories and, as far as possible, carried out his own laboratory work. However, he also saw malaria, yellow fever, hookworm, venereal disease field units in operation; he made a visit to Dutch Guiana to see schistosomiasis, and so on. The plan worked well and at the end of the seven months' instruction, the students had some real idea of what medicine in the tropics was like.

With the coming of peace, it was obvious that a permanent course was desirable. This must be basically civilian in its viewpoint, and more attention must be given to certain diseases which were treated rather perfunctorily in the wartime courses. More attention must also be paid to preventive medicine (in its widest aspects) and to native populations. A longer total course

appeared to be desirable, but the advantages of the wartime courses should be retained.

The present course was accordingly planned to avoid the "block" system of teaching (that is, to teach horizontally instead of vertically), to include a considerable amount of the principles of preventive medicine and hygiene, and to give instruction in clinical tropical medicine in the tropics.

The teaching session in Canada begins in October and falls into two academic terms. The curriculum embraces two groups or subjects. The first is concerned with the principles of public health (statistics, administration, chemistry, bacteriology, nutrition, health education, and group hygiene), with a total of some four hundred hours' instruction. Students who have previously taken a Diploma in Public Health, or similar qualification, may be excused from this portion. The second group includes about 300 hours' laboratory and lecture instruction on tropical laboratory and clinical medicine, minor tropical sanitation, and tropical preventive medicine, and epidemiology. This teaching is based on the Balfour synthetic plan described above. No attempt is made to teach every tropical disease, to study every parasite. The idea is to instil basic principles, to teach the way about the laboratory in the tropics, the way about the literature. In the laboratory, the emphasis is on diagnosis and pathology, in the lecture room on the logical course of the disease, its prevention and cure. This section starts with the microscope and haematology—and practical haematology (and later faeces examinations) enters into practically every day's program. Following the introduction, malaria and mosquitoes are taught and studied—morphology of the parasites and vectors, life cycles, pathology, and clinical course of the disease, chemotherapy, malarial surveys, epidemiology, eradication, and control. This is followed by similar studies of the haemoflagellates and their vectors, of insect-carried virus diseases, and of the rickettsial diseases and spirochaetosis. A switch is made at this point to the enteric infections, starting with amoebiasis and proceeding to the bacterial diarrhoeas and dysenteries; non-blood sucking flies are introduced at this stage. Then the two groups of helminths are considered. By this time, the student is in a position to regard protozoology, helminthology, and entomology, as subjects by themselves. He has now covered the major portion of his course and the remaining subjects are of a miscellaneous nature—diseases of lower animals, skin diseases, heat diseases, nutritional diseases, noxious animals, and so on—and are placed at the end.

Throughout the entire course, the clinical aspects of tropical medicine are kept before the student's attention, and are coordinated carefully with the laboratory teaching. There are, on the average, two to three lectures daily, one on clinical and one or two on non-clinical subjects. The remainder of the time is spent on practical laboratory instruction.

Thereafter, the student goes to the West Indies for practical instruction in clinical tropical medicine and tropical preventive medicine and hygiene.

There is some elasticity about this part of the course, depending on the



students' own desires. However, in general, it involves residence in Jamaica, Trinidad, and British Guiana, under local medical officers who are affiliated with the university. In Jamaica, the student mainly studies public health problems, malaria, tuberculosis, leprosy, venereal diseases and yaws control, child welfare, including ante-natal and mothers' and infants' clinics, food handlers' clinics, general tropical sanitation, including sanitary engineering, water supplies and refuse disposal, tropical housing, markets, dairies and abattoirs, as well as airport and port sanitation and fumigation for insect and rodent eradication. This part of the course is entirely practical, the theory having been taught in Canada. In Trinidad and British Guiana, the course is basically clinical, although preventive aspects are not neglected here either. In British Guiana, part of the instruction is in the Colonial Hospital, part at the Aluminum Company's hospital in Mackenzie. In Trinidad, it is partly at the Colonial Hospital and partly with field units. Alternative hospitals may be selected, while for those who wish to take up public health an arrangement has been made for students to be seconded to the excellent school of malariology at Maracay in Venezuela. Here he is not only fully instructed in malariology from every point of view, but he is given experience with the Mobile Health Units which play so important a part in rural tropical medicine.

After approximately one year's study the student is awarded his Diploma in Tropical Medicine and Hygiene. Should he wish to proceed further, however, postgraduate degrees of M.Sc. and Ph.D. in most of the subjects studied are available at the university, and should the demand be sufficient, special revision or advanced non-degree courses, may also be instituted.

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### INCREASING ENTRANCE REQUIREMENTS

At the annual meeting of the Association of American Medical Colleges held in Columbus, Ohio, June 5, 1899, a special committee appointed to consider the status of medical education in the United States, recommended "that from and after July 1, 1900, and until more stringent rules be adopted, students beginning the study of medicine must possess a diploma from a high school giving a thorough preliminary education, or must pass a thorough examination in all the branches usually taught in such schools. This examination is to be conducted by a state superintendent of public instruction or someone delegated by him, or by members of the faculty of a university or college who are not connected with the medical faculty of the college the student wishes to enter, or by such a body as the board of regents of the university of the State of New York."



ASSOCIATION OF AMERICAN MEDICAL COLLEGES  
PROGRAM FOR SIXTIETH ANNUAL MEETING  
to be held in  
COLORADO SPRINGS, COLORADO  
NOVEMBER 7, 8 AND 9, 1949  
HEADQUARTERS: HOTEL BROADMOOR

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**Monday, November 7**

(Theatre)

9:30 A. M.—The Social Responsibilities of Medicine—  
Virgil M. Hancher, President of State University of Iowa

10:15 A. M.—Appointment of Nominating Committee

10:30 A. M.—Section 1 attends Round Table A (Theatre)  
Section 2 attends Round Table B (Ballroom)  
Section 3 attends Round Table C (Basement of  
Southeast moor)

12:30- 2:30—Luncheon Hour

2:30 P. M.—Section 2 attends Round Table A (Theatre)  
Section 3 attends Round Table B (Ballroom)  
Section 1 attends Round Table C (Basement of  
Southeast moor)

7:00 P. M.—Association Dinner (Main Dining Room)  
Program by Koshare Indian Dancers

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**Tuesday, November 8**

(Theatre)

9:30 A. M.—Presidential Address—  
J. Roscoe Miller, President, Northwestern University

10:00 A. M.—Education in Diseases of the Chest—  
Charles Austin Doan, Ohio State University

10:20 A. M.—Section 3 attends Round Table A (Theatre)  
Section 1 attends Round Table B (Ballroom)  
Section 2 attends Round Table C (Basement of  
Southeast moor)

12:30- 2:30—Luncheon Hour

2:30 P. M.—Executive Session (Theatre)

Reports of:

Chairman of Executive Council  
Secretary  
Editor  
Committee Chairmen

Bestowal of Borden Award  
Election of Officers for 1950  
Choice of time and place of 1950 meeting

8:30 P. M.—Program on Films in Medical Education (Theatre)

Arranged by David S. Ruhe, Director of Medical Film  
Institute of Association of American Medical Colleges

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## Wednesday, November 9

(Theatre)

9:30-10:00 A. M.—Report from Round Table A

Carlyle Jacobsen, State University of Iowa  
Leland Parr, Geo. Washington University

10:00-10:30 A. M.—Report from Round Table B

Ward Darley, University of Colorado  
Edward L. Turner, University of Washington

10:30-11:00 A. M.—Report from Round Table C

John B. Youmans, University of Illinois  
Myron M. Weaver, University of British Columbia

## Information

All sessions will be held in the Broadmoor, and will begin promptly at 9:30 A. M.

Everyone in attendance should register; registration begins Sunday at

9:00 A. M.

Anyone who desires to participate in the discussions is invited to do so. Each discussion should be limited to 5 minutes' duration unless permission for more time is granted by the chairman.

Anyone who is in any way interested in medical education is cordially invited to the meeting. It is not a closed meeting—except for the executive or business session which will begin on Tuesday afternoon and continue until all business is disposed of.

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## The Round Tables

### Round Table A—Student Selection Problems

Chairman—Carlyle Jacobsen, Iowa

Discussants: Harold Davenport, Northwestern

James Perkins, Swarthmore

\*Leland Parr, George Washington

Joe Markee, Duke

### Round Table B—Leadership in Curriculum Planning

Chairman—Ward Darley, Colorado

Discussants: Coy C. Carpenter, Bowman Gray

\*Edward L. Turner, University of Washington

C. N. Hugh Long, Yale

Loren R. Chandler, Stanford

### Round Table C—Making the Internship a Planned Educational Experience

Chairman—John B. Youmans, University of Illinois

Discussants: \*Myron M. Weaver, University of British Columbia

Arthur C. Bachmeyer, University of Chicago

Reginald Fitz, Harvard

Charles T. Dolezal, American Hospital Association

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\*These discussants will also act as recorders of high points of the discussion to assist the Chairmen in making their summary reports.

# JOURNAL

OF THE

## Association of American Medical Colleges

Volume 24 No. 5

FRED C. ZAPFFE, Editor

September, 1949

**The 1949 Annual Meeting**

The 1949 meeting of the Association will be held at the Broadmoor Hotel, Colorado Springs, November 7, 8 and 9.

The opening address will be given by President Virgil M. Hancher of the State University of Iowa at 9:30 A. M., Monday, November 7, on the topic, "The Social Responsibilities of Medicine."

The remainder of Monday morning and all Monday afternoon will be devoted to three Round Table discussions centering around the following topics: "Student Selection Problems;" "Leadership in Curriculum Planning;" and "Making the Internship a Planned Educational Experience."

The Association Dinner will be a purely social affair with the ladies present and with a program of entertainment by the Koshare Indian Dancers.

The Tuesday morning session will open at 9:30 A. M. with Dr. J. Roscoe Miller's presidential address followed by Dr. Charles Austin Doan's paper on "Education in Diseases of the Chest." The remainder of the morning will be devoted to the Round Table discussions.

Tuesday afternoon, the Executive Session will be held, at which time consideration will be given to amending the Association's Constitution and By-Laws to make possible incorporation and the acceptance of affiliated members from outside the United States. At 8:00 P. M., a program on "Films in Medical Education" will be provided by the Association's Medical Film Institute.

The final session Wednesday morning will be given over to the sum-

marized reports from the three Round Tables given by their chairmen and recorders.

A special train will not be provided since a wide choice of transportation to Colorado Springs is available including:

The Chicago Rock Island and Pacific R. R., the Rocky Mountain Rocket, leaving Chicago at 1:55 P. M. and arriving in Colorado Springs at 8:35 the following morning.

The Chicago, Burlington and Quincy R. R., the Denver Zephyr, leaving Chicago at 5:30 P. M., arriving in Denver 8:30 the following morning, leaving Denver via the Rio Grande at 8:50 A. M., and arriving in Colorado Springs at 10:42 A. M.

The Chicago and Northwestern, the Streamliner City of Denver, leaving Chicago at 5:00 P. M., arriving in Denver at 8:00 A. M. the following morning, leaving Denver 8:50 A. M., arriving in Colorado Springs via Rio Grande at 10:42 A. M.

The Missouri Pacific Lines, a train leaving St. Louis at 4:00 P. M., or Kansas City at 9:10 P. M., and arriving in Colorado Springs at 7:45 the following morning.

Braniff International Airways flies directly to Colorado Springs and United Air Lines and Trans World Airline fly to Denver.

Dr. and Mrs. Ward Darley are making special arrangements to make the visit of the wives who attend the meeting both pleasant and profitable.

Special rates for the meeting are on the American Plan as follows:

Room for single occupancy.....	\$14.00
Room for double occupancy (twin beds) .....	24.00

Suites (parlor and twin-bedroom) 28.00

It is suggested that reservations be made directly with Charles A. O'Toole, Manager, The Broadmoor, Colorado Springs, Colorado.

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**Meeting of Representatives of Medical Colleges in Deadwood, South Dakota, July 14 and 15, 1949**

Representatives of medical colleges in Nebraska, Iowa, Missouri, Colorado and South Dakota met in Deadwood, South Dakota, July 14 and 15, 1949, to discuss acute problems of more than passing interest to medical colleges. Three practicing physicians were also present. This is the first of the kind to be held. It is highly commendable and should prove a stimulus to other medical colleges to do likewise. At such a meeting, it is possible to discuss problems which cannot be discussed at any other time. The result should prove advantageous if medical colleges will give serious thought to it. The following is a brief resume of what transpired at the meeting in question.

The general problem of the curriculum was discussed. The question was raised as to whether or not advances in medicine had gone so far afield that it might be necessary to add a fifth year in order to present the fundamentals as well as the areas of progress in the basic sciences and in the clinical years.

A spirited difference of opinion regarding the clinical teaching in the basic science years arose. The clinicians who were present felt that they should decide as to the type of clinical material presented and the place in the first two years curriculum with respect to presentation. On the other hand, those representing the basic sciences felt that it was their obligation and duty to first present the fundamentals and then to decide themselves the amount and the type and the position in the curriculum of clinical work. Everyone agreed that an early introduction of clinical work

was extremely necessary if we were to hold the students' interest and properly correlate the whole field of medical education.

It was also agreed that the type of training best suited for putting over a philosophy which would increase the students' interest in the general practice of medicine was the preceptorship. The feeling was not quite unanimous for excluding "general practice" as a specific facet in the four years of medical education. The general opinion, with the exception of one individual, held to the belief that the preceptorship and the internship were the most satisfactory methods for spreading the gospel of the general practitioner. There was considerable agreement, however, that in the majority of medical schools a specialistic philosophy was invoked on third and fourth year students simply because the instructors in the last two years were specialists and naturally taught with such an attitude of mind.

Much time was spent on how to achieve the best possible sort of correlation in the basic science years. The chief obstacle seemed to be, in most instances, a lack of man power since any correlated course requires a much larger personnel. Emphasis was also placed on "glamorizing" the basic science years in order not only to do a better job of teaching, but to stimulate the interest of the students. Finally, the plan of clinical clerkships for sophomore students, which was instituted at South Dakota two years ago, was well commended.

A lively discussion took place relative to exchanging professorships both in the basic sciences and in the clinical fields within this geographic area on a one or two week basis. Everyone felt this would be stimulating to the professor who was exchanged and to the students and faculty of the college to which the individual was sent. One pertinent point was made that while all medical educators felt that practicing physicians should take on both graduate and refresher courses, scarcely any at-

tention had been given to improving the minds and the general ability of those who teach. It was agreed that too many instructors feel that they know about all there is to know and consequently do not need the type of stimulation mentioned above. Such a philosophy was to be felt entirely erroneous. In this connection, it was pointed out that entirely too many physicians felt that because they have the degree of M.D. they are endowed with all of the qualifications to make them outstanding teachers.

A very important survey of the many aspects of Federal Aid to medical education were outlined. It was the consensus that the existing proposals now pending in Congress were dangerous from several standpoints. First of all, it was believed that most state legislatures would reduce appropriations for medical education if the United States Government furnished as much as 10, 15, or 25 per cent of the financial support. Secondly, the inability to obtain qualified faculty members on money obtained on a grant or semi-grant basis was viewed with alarm. Thirdly, it was felt that if the plan was to become a law, medical schools would soon depend heavily on such Federal aid to the extent that they would have to follow out any policies laid down by the federal security agency even though such policies were diametrically opposed to the best methodology now used in medical schools. Lastly, there was a considerable feeling that Federal aid to medical education would impose certain blocks relative to the number of students to be admitted, the geographical location of such students and even, perhaps, their over-all qualifications.

As opposed to federal aid it was believed that the medical schools must find new ways and means of persuading the various state legislators that they must provide generous financial support if they wish to have the best possible product graduated from the medical schools. It may sound trite, but it was a general opinion that the best way to

have legislators provide satisfactory budgets for medical schools was to use the method of personal contact not only with the physicians and people who know the legislators, but with the Governor and legislators who hold strategic positions. Equally important in getting the proper support for medical education is placing emphasis on the service that medical schools render the state. For instance, if a medical school can show that it has actually made it possible for a community which wants a doctor to get a doctor—if it can impress the fact that it has carefully recruited nurses and technicians—and if it can clearly show evidence of having an interest in the health of the public within a state, then these services, and many others, will become a torch materially to help in lighting the path to the state treasury.

The important matter of admitting applicants to the medical school was discussed thoroughly. Gaining acceptance has become a terrific problem. No one had any particular suggestions to make with respect to improved methods for the selection of medical students. It was agreed that each student who failed to be promoted, either because of the scholastic difficulties or otherwise, created a distinct financial loss to the state since, if it could have been foretold beforehand, another could have been selected in his place. One pertinent suggestion was made with respect to interviews, and this had to do with a battery of three faculty members interviewing three students at one time for a period of about 20 to 30 minutes. Actually, this type of interviewing deviates markedly from the old, more stereotyped, form of interview session. In the multiple interview, the student is asked as many general questions, if not more, than those which have to do with his premedical background and his future in medicine. Actually, this type of conference resolves itself into a competitive mechanism on the part of the students involved. It would seem that this plan is worthy of a trial.

All of the schools represented indicated that the mortality in the various classes was definitely on the decrease. This was attributed not to better selection methods, but to the fact that, especially in the last four or five years, there was a better qualified group and a larger group from which to choose. In addition, during this same period we have had a more serious minded, more emotionally stable and a more "I know what I want to do and where I am going" group of students.

In general, it was felt that it would be practical and stimulating for state schools to take a few out of state students. As everyone knows, states without any medical school have grave difficulties in sending their sons and daughters to medical school. It was the consensus that state schools have some obligation to their states but because of certain political implications, in many instances, not much could be done about it at the present time.

Finally, much time was devoted to the problem in certain states which have been pressuring the medical schools to increase their enrollment. The consensus was that such a plan is impractical unless more money is forthcoming and unless the physical plants and faculties are enlarged. The chief bottleneck is in securing qualified faculties. The greatest drawback is in the basic science years since most four year schools can accommodate a larger number in the third and fourth years than they can in the first two years. This fact does make it seem feasible that for a considerable time to come the four year schools can accommodate transfers from the two year schools.

Many other subjects of general interest were discussed, among them being clinical service, budgetary problems, methods of medical compensation, preparation of undergraduate medical students for general practice, graduate and postgraduate training for doctors in general practice, faculty salaries, tenure, relationship between medical education, medical practice and the service pro-

gram of medical schools, premedical requirements, draft deferment for premedical students, quarter versus the semester type of scheduling, regular versus accelerated medical school teaching programs, and S1453 and its implications pro and con.

Those in attendance were: Dr. H. C. Lueth, University of Nebraska, Dr. Tra-  
wick Stubbs, University of Missouri,  
Drs. R. T. Tidrick and W. R. Ingram,  
University of Iowa, Dr. F. D. Murphy,  
University of Kansas, Dr. R. C. Lewis,  
University of Colorado, and Drs. W.  
L. Hard, R. L. Ferguson and Donald  
Slaughter, University of South Dakota.  
Three practicing physicians, Dr. F. S.  
Howe, Dr. Lyle Hare and Dr. H. E.  
Davidson, sat in on several of the dis-  
cussion periods.

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#### 1948 Applicants

The first count of applicants and applications for admission to the 1948 freshman class of the medical colleges of the United States has been completed. Delay has been due to some colleges sending in their cards late—often only after repeated requests have been made. The count is: Applicants, 24,011; applications, 73,659; accepted applicants, 7,997; enrolled in 1948 freshman classes, 6,458.

The number of applicants and applications made by them exceeds the numbers of any preceding year. In 1947, 18,829 applicants made 56,279 applications. Accepted applicants: 6,512. The single and multiple accepted applicants were divided about equally, 3,183 single; 3,329 multiple. Rejected applicants: 6,603 single; 6,302 multiple. There were 2,008 women applicants; 714 were accepted. Single applicants, 300; multiple, 414. Reject single applicants, 721; multiple, 573. Not only the men but the women applicants have increased in numbers since the end of the war. Further details on this study will be available when the study is completed.



### The Journal Mailing List

This is an urgent appeal to all member medical colleges to assist in keeping alive the mailing list of the JOURNAL for their respective institutions. Every effort is made by the JOURNAL staff to make needed changes in these lists, but too often necessary changes cannot be made because of lack of knowledge of faculty changes in medical colleges. Members of the faculty retire or die. New men are appointed but no notice is sent to the office of the Association that such changes have taken place. Therefore, names of men are left on the mailing list who should not receive the JOURNAL and the names of men who should receive the JOURNAL are not on the list. If it is realized that the list contains nearly 5,000 names, it can be appreciated what a difficult job it is to keep the list up to date. Each revision is a considerable expense, if the revision is made at one time as has been the custom always. Lists have been sent to member colleges for revision every year or two, at most, but the labor involved for the office

staff which must do this job is terrific. Therefore, colleges are urged to help in keeping their lists alive. Send a revised list of names of faculty members, and others, whom you would like to receive the JOURNAL. It will spread the work over a period of time which will make the work of revision less arduous. Some colleges—a very few—do that, but most of the colleges in membership in the Association do not do it. Please help.

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### Dr. Eli Herr Long

Eli Herr Long joined the faculty of the University of Buffalo School of Medicine in 1882. He became professor of materia medica and therapeutics and later professor emeritus, in the school of medicine, professor of materia medica in the school of pharmacy and professor of materia medica and therapeutics in the school of dentistry; past president of the Association of American Medical Colleges, 1908-1909; died May 31, aged 88.

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**Medical Schools and Finances.**—"We must not forget that many of the schools have faced financial difficulties during the period of adjustment to increased preliminary requirements, because of lessened attendance. This may not apply to the few endowed schools, but it does to the average of the better class of medical schools, such as compose this Association. The figures show that the number of medical students in attendance in the United States in 1908 was 16.8 per cent less than the average number five years earlier. But the fact of lessened average income does not seem to have retarded progress in our schools. It is true that some schools gained in attendance during this period, and there are some of the best schools in either column. It is evident that the law of supply and demand has not been wholly determinative during the period, for our population has increased as usual; but there seems to be no present danger that the supply of physicians will fall short. . . . The practical question will be that of the attitude of the college toward the competency of its graduates, or the quality of the supply it furnishes." (President's Address: Eli H. Long, President, Association of American Medical Colleges, 19th annual meeting, March 15-16, 1909.)

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## College News

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### University of Illinois College of Medicine

Dr. E. W. Hawthorne has been awarded a Life Insurance Medical Research Fund Senior Fellowship. The Fellowship carries a stipend of \$3,500. Dr. Hawthorne will work on research studies concerning high blood pressure caused by kidney disorders under the guidance of Dr. G. E. Wakerlin, professor and head of the department of physiology.

Dr. Carroll L. Birch, associate professor of medicine, has been granted a sabbatical leave for a six-month tour of Africa, where she will study African Sleeping Sickness and other tropical diseases.

The distinguished service award of the University of Kansas was presented to Dr. Warren H. Cole of Chicago at the recent graduation and alumni exercises of the college. The award is presented annually by the University of Kansas through its Alumni Association to graduates for their distinguished service in various fields. Dr. Cole received the bachelor of science degree from Kansas in 1918. Dr. Cole is professor of surgery and head of the department at Illinois.

A bronze plaque commemorating service and sacrifice will be erected as a War Memorial. A fund of \$1,300 has been collected and will be used for the preparation of the plaque. The remainder of the funds will be used for the purchase of books related to military subjects. Choice of the books will be left to the discretion of the Deans of the Colleges of Medicine, Dentistry, and Pharmacy.

Dr. Percival Bailey has been re-elected chairman of the Professional Faculty of the University of Illinois Chicago Professional Colleges for the coming year. Dr. Bailey holds the rank of distinguished professor of neurology and neurological surgery in the College

of Medicine. The principal purposes of the Professorial Faculty are to bring about closer cooperation between the staff of the Chicago campus and the Urbana campus of the University of Illinois, and to provide the vice-president with an opportunity to inform the members of the Professorial Faculty of possible goals to be obtained in professional education and programs for the welfare of the campus and the Chicago Professional Colleges.

Grants: Five research grants, totaling \$21,460, have been awarded to the college. The Chicago Heart Association awarded a grant of \$10,000 to Dr. C. C. Pfeiffer in the department of pharmacology for the study of the effects of stress and diet on the regulation of the flow of blood into the kidneys. The National Cancer Institute has renewed a grant in the amount of \$5,940 for a study to determine which dyes will be taken up by the cells of the stomach in an attempt to produce cancer of the stomach by the feeding of dyes. The study is being conducted by Dr. Ivy and Dr. Francis Flood in the department of clinical science.

The Roche Foundation gave \$2,500 to support a fellowship in the department of pharmacology. The fellow is assigned to a research project involving a continuation of the study of curare-like drugs, under the supervision of Dr. Klaus R. Unna.

Abbott Laboratories has made a grant of \$2,120 for the study of a synthetic sweetening agent which does not have a caloric value. Human and animal toxicity studies are being conducted by Dr. M. I. Grossman and Miss Charlotte Robertson of the department of clinical science to determine its suitability for usage in diabetic and reducing diets. Hoffman-LaRoche, Inc., has awarded a grant of \$900 to subsidize pain tests involving the study of analgesic drugs in human volunteers. The

tests are being conducted by the department of pharmacology, under the direction of Dr. Pfeiffer.

The National Foundation for Infantile Paralysis has awarded a March of Dimes grant in the amount of \$3,820 for the continuation of a study of the value of electrical stimulation in muscles paralyzed as a result of poliomyelitis. The study will be conducted under the direction of Dr. A. C. Ivy, Dr. H. Worley Kendell and Dr. A. A. Rodriguez of the department of physical medicine.

Several years ago, with the financial support of the National Foundation, Dr. A. C. Ivy, Dr. S. L. Osborne and Dr. A. Kosmer of Northwestern University cooperated with the General Electric Corporation in producing a multiple frequency wave generator as an aid in the treatment of paralyzed muscles in the convalescent stage of the disease.

The new grant will permit the continuation of the clinical evaluation of this type of electrical therapy.

The U. S. Public Health Service has awarded a grant in the amount of \$15,000 to support research studies involving the 22 million volt betatron. The grant will be used specifically for the study of the effects of the betatron x-ray beam on bone and cartilage. The study is under the supervision of Dr. Roger A. Harvey of the department of radiology and Dr. G. A. Bennett of the department of pathology.

Promotions: Dr. Theodore Cornbleet, from associate professor to professor of dermatology; Dr. Theodore Wachowski, from associate professor to professor of radiology.

Promoted to rank of associate professor: Dr. Gustav L. Zechel and Dr. James C. Plagge, anatomy; Dr. Aaron B. Kendrick, Dr. Louis R. Limarzi and Dr. Frederick C. Lendrum, medicine; Dr. Paul H. Holinger, Dr. Maurice F. Snitman, and Dr. Marvin J. Tamari, otolaryngology; Dr. Maurice Lev and Dr. Lester S. King, pathology; and Dr. John J. Fahey, orthopedic surgery.

#### University of Minnesota Medical School

A new program of scholarships will be offered to undergraduate students by the Minnesota Medical Foundation, Dr. Owen H. Wangensteen, president, announced. The scholarships will be awarded annually in amounts totalling \$2,500. Individual grants will range between \$500 and \$1,000. Members of the sophomore, junior and senior classes are eligible to apply for the scholarships.

The purchase of valuable historical medical books for the medical library was made possible when \$3,735 was presented to the Friends of the University of Minnesota Library through the Greater University Fund. The money is a gift of the university's medical school classes of 1922-1923 and was raised by a committee headed by Dr. Owen H. Wangensteen, chairman of the department of surgery at the university, during the 1948 and 1949 campaigns of the Greater University Fund. The gifts were made by the medical school alumni for the purchase of medical books and papers for which no other funds are available. The Friends of the Library group will carry out the arrangements for buying these historical medical materials.

Dr. Elexious T. Bell, professor of pathology, retired June 15. He has served the university since 1910, teaching first anatomy and since 1911 pathology. He was appointed head of the department in 1912. An advisory committee has recommended the establishment of a fund of \$100,000 to create and maintain for teaching and research a Museum of Pathology in the medical school, which will bear his name. Dr. James S. McCartney, Jr., is chairman of the E. T. Bell Fund Committee.

The Department of Postgraduate Medical Education announces a continuation course in anesthesiology to be held September 12, 13, 14. The course is directed toward those physicians who spend a portion of their time as anesthesiologists. Emphasis will be placed on anesthetic agents commonly used by

part time anesthetists. Clinical problems frequently encountered in anesthesiology will be stressed. Distinguished visiting physicians who will participate as members of the faculty for the course include Dr. Stewart Cullen, professor of anesthesiology, University of Iowa Medical School; Dr. John Adriani, director, department of anesthesia, Charity Hospital, New Orleans; and Dr. J. S. Lundy, Chief of Anesthesia at the Mayo Clinic, Rochester, Minnesota. The remainder of the faculty will be made up of full time and clinical members of the staff of the University of Minnesota Medical School.

A course in Psychosomatic Medicine for general physicians will be presented September 12 to 24. Emphasis will be placed on interview techniques and the actual care of patients with emotional problems. A major part of the teaching will be done in the Outpatient Department of the University Hospitals where the faculty members will include full time and clinical staff of the Medical School and the Mayo Foundation.

A continuation course in Infectious Diseases will be presented October 3, 4 and 5. The course is intended for general physicians and will emphasize the diagnosis and management of the more common infectious disease problems. Dr. Louis Weinstein of Boston will be the visiting faculty member for the course and will discuss the pneumonias and current concepts of the common cold and influenza. Other members for the faculty of the course will include full time and clinical staff of the university and the Mayo Foundation.

A continuation course in Pediatric Roentgenology will be held October 31 to November 5, 1949. The course is intended for radiologists and pediatricians. The material to be presented will include the basic medical sciences, clinical medicine and diagnosis roentgenology, as it pertains to general and special problems in the field of childhood diseases. Distinguished visiting physicians who will participate as members of the faculty for the course will include Dr. John Caffey, Babies Hospital,

Columbia University Medical Center; Dr. Edward B. D. Neuhauser, Children's Hospital, Boston; Dr. Edith Potter, University of Chicago; and Dr. Frederic N. Silverman, Children's Hospital, Cincinnati. The remainder of the faculty for the course will be made up of clinical and full time members of the staff of the Medical School and the Mayo Foundation.

A continuation course in Diseases of the Chest will be presented October 20, 21 and 22, 1949. The course is sponsored by the Minnesota Chapter of the American College of Chest Physicians and is intended for general physicians. Among the subjects to be presented will be "The Work-up of a Patient with an Abnormal Chest X-Ray Shadow," "The Differential Diagnosis of Cardiac and Pulmonary Dyspnea," "The Psychosomatic Aspects of Chest Diseases," and "Acute Respiratory Diseases." Symposia will be held on pulmonary tuberculosis and carcinoma of the lung. A clinical x-ray conference and medical clinic will be held on chest diseases. Dr. O. A. Sander, Milwaukee, Wisconsin, will be a visiting faculty member for the course. Clinical and full time members of the staff of the Medical School and the Mayo Foundation will complete the faculty for the course.

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#### University of Texas Medical Branch

The Medical Branch plans to open a special research laboratory for industrial hygiene in September. Facilities and space have been provided for the project. It will be under the direction of Dr. Carl A. Nau, professor of preventive medicine and public health, and J. M. Neal, sanitary engineer. The new laboratory will cooperate particularly with the heavy industries in Texas City, but is available for consultation and service to all Texas industries.

Dr. Corsan Reid, associate professor of physiology of New York University, gave a series of lectures in July. Dr. Reid discussed the application of funda-

mental physiological principles to the practical care of the sick.

Mark H. Lemmon of Dallas, consulting architect of the University of Texas, has submitted preliminary plans for a new laboratory building authorized by the Board of Regents. It is to be financed from the proceeds of bonds recently issued by the university. The building is planned to be 55 feet wide and 250 feet long and five floors in height. It will accommodate the Medical Branch Library, with a capacity of 100,000 volumes, and student and staff facilities for physiology, biochemistry and nutrition, bacteriology and parasitology and pharmacology.

Frank W. Townsend, M.D., of the Scott and White Clinic, Temple, Texas, has been appointed associate professor of surgical pathology and he will also be consulting surgical pathologist to the hospitals of the Medical Branch.

John C. Finerty, Ph.D., associate professor of anatomy, Washington University Medical School, has accepted appointment as associate professor of anatomy. Dr. Finerty received his professional training at the University of Wisconsin and became a Rackham Foundation Fellow at the University of Michigan in 1942. He has been associated with Washington University Medical School, St. Louis, for the past few years where he has developed broad research projects relating to the anterior pituitary.

Dr. Walter A. Saborido, president of the Argentine Medical Association and professor of gynecology at the University of Buenos Aires Medical School, was a recent visitor.

Under provisions of a special appropriation by the Legislature of the State of Texas, the University of Texas School of Medicine is admitting 162 students to the first year class this fall. Funds have been provided for necessary expansion of teaching facilities and personnel. In order to accommodate the increased size of classes, a new laboratory building is being provided by funds from a special Bond Issue.

The new building will house the departments of bacteriology and parasitology, pharmacology, biochemistry and nutrition, and physiology. It will also provide facilities for an expanded library.

Legislative appropriations to the Medical Branch passably recognize the Medical Branch Hospitals as State general hospitals particularly for the reference of indigent patients from rural parts of Texas where local hospital facilities are not satisfactory.

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### Woman's Medical College

The following prizes were awarded at the June Commencement: The President's Prize and the Prize in Medicine both went to Aileen Scheerer Geiger of Reading, Pa.; The Dean's Prize to Bessie Dituri of Los Angeles, Cal.; the Prize of Surgery to Gertrude Freeman Copperman of Philadelphia, Pa. The Elise L'Esperance Prize for "work in the cancer field by graduate or undergraduate students" was awarded to Dr. Cornelia E. Motley, a Fellow in Oncology and Gynecology.

Dr. Catharine Macfarlane, research professor of gynecology, was named twenty-sixth recipient of the Strittmatter Award for 1948. She was the first woman to receive this award, which is given annually to the physician "presenting to the Philadelphia County Medical Society the most valuable contribution to the healing arts in any given year." It consists of a gold medal and an engrossed scroll which reads: "In recognition of her long and continued contributions to Philadelphia medicine as gynecologist of international reputation, stimulating teacher and civic leader, but especially for her pioneer research and wise and able direction in the early detection of cancer, which has been so fruitful in the fight against this disease."

Dr. Isabelle H. Perry has resigned as director of the department of oncology. She will be full time executive secretary of the subcommittee on oncol-

ogy of the committee on pathology for the National Research Council. Dr. Mildred Pfeiffer has been appointed to succeed her as director of the department.

The Graduating Class (1949) has inaugurated a Memorial Insurance Plan which will provide a generous Class Gift to the college at the 20th reunion of the class.

**New Appointment:** Dr. Irene E. Maher, clinical instructor in medicine, to be assistant dean.

**Promotions:** Dr. Marjory K. Hardy, clinical associate professor in dermatology and syphilology; Dr. Mildred Pfeiffer, director of the department of oncology; Dr. Jean Crump, professor of pediatrics in charge of allergy; Dr. William H. Erb, associate professor of surgery; Dr. Lloyd W. Stevens, assistant professor of surgery; Dr. William A. Weiss, associate professor of anesthesiology.

**Grants:** The following research grants have been renewed by the U. S. Public Health Service to members of the faculty: To Dr. Harold L. Israel, associate professor of medicine, for continued study on "B. C. G. Vaccination in Sarcoidosis," \$3,240; to Dr. Ruth E. Miller, professor of bacteriology, for "A Study of the Effect of Immune Reactions on the Metabolism of Bacteria," \$5,448; to the department of oncology for cancer teaching, \$25,000. A new grant for a three-year period has been made by the U. S. Public Health Service under the National Mental Health Act for undergraduate training in psychiatry, totalling \$37,302.

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#### **New York University- Bellevue Medical Center**

Doctors and engineers will join forces to study problems of industrial health when New York University inaugurates a new course in industrial hygiene. The new course is offered cooperatively by the College of Engineering and the Institute of Industrial Medicine of the New York University-Bellevue Medical

Center and is planned to meet the growing demand for professional workers trained in the techniques of industrial hygiene. It is open to physicians and to engineers holding bachelor degrees in sanitary, chemical, mechanical or civil engineering, or having the equivalent training in the natural sciences, including chemistry and biology.

At the beginning of the course, physicians and engineers will attend the same classes and will study industrial medical practice, biostatistics, environmental conditions in work places and their relationship to disease, toxicology and industrial physiology. Following this, physicians and engineers will be separated. Physicians will take up these subjects: industrial medical practice, occupational diseases, toxicology and in-plant training. The engineers will study: environmental conditions and their control, and in-plant training.

The new course will begin September 26, 1949, and will embrace nine months of didactic teaching and three months of in-plant work. Tuition fee is \$600, plus registration. Further information may be obtained from the Dean, New York University College of Engineering, Bronx 53, N. Y., or from the Dean, New York University Postgraduate Medical School, 477 First Avenue, New York 16, N. Y.

Dr. Harry Most, associate professor of preventive medicine, has been appointed professor; Dr. Robt. Ward, to professor of pediatrics.

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#### **Northwestern University Medical School**

Dr. Alexander A. Day, professor of bacteriology and chairman of the department, retired August 31. A member of the school's faculty for 37 years, he was given a citation by the University Senate. Expansion and development of one of the Medical School's key departments, that of audiovisual medical education, were effected during Dr. Day's chairmanship. The department was one of the earliest in its field, having been established at Northwestern



in 1926. Services of the department are available to every class and division of the school, to assist in the training of physicians and surgeons.

Northwestern has been awarded grants totalling \$18,730 from the March of Dimes funds of the National Foundation for Infantile Paralysis.

One grant, in the amount of \$10,730, will further the training of physical therapists. The program will be directed by Dr. John S. Coulter, chairman of the department of physical medicine. Since 1942, the Foundation has lent financial support to the department for this instruction, because well trained physical therapists are essential to the care of polio patients. The 1949 grant will also extend to the special training of physicians and nurses in polio work.

The \$8,000 grant will expand studies of the successive development of clinical signs in human polio, in order to determine the physiologic basis for the development of each sign. The studies will be conducted under the direction of Dr. Lewis J. Pollock, chairman of Northwestern's department of nervous and mental diseases. Similar investigations have been directed by Dr. Pollock for the past five years with the support of the Foundation.

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#### Chicago Medical School

Subsidiary Scholarships to subsidize the school to the extent of the complete education of a medical scholar for the period of four years, the duration of the medical course, have been established. Each scholarship amounts to \$10,000 and may be paid in one sum or in four annual installments of \$2,500 each. This amount represents the difference between what the student pays in tuition during his four years and the amount of money the college has to expend during the same four years.

Subsidiary Scholarships: Baird Foundation; A. B. Jaffe Foundation; Metalfield Corporation; Dr. John C. Evans, gift of the Reliable Construction Co.; James A. Kaufman, gift of the Kay Foundation; Simon M. Rosenblum, gift

of an anonymous friend; Dr. I. Harrison Tumpeer, gift of an eastern chemical company, in memory of Dr. Tumpeer; Dr. Maurice Oppenheim, in honor of Dr. Oppenheim, created by a friend in Flushing, New York; Abe Stark, established at Laurence, L. I.

Scholarship: The Maurice and Rose Smoler Scholarship, established by Smoler Bros., Inc.

Grants: (1) For special research in endocrinology, under the direction of Dr. Ben Blivaiss; from the Committee on Research in Endocrinology, Division of Medical Science, National Research Council. (2) For research in the mechanism of action of insulin, under the supervision of Dr. Piero Foa; from Division of Grants and Fellowships, U. S. Public Health Service. (3) For study of the role of hypothalamus and sex physiology, under the supervision of Dr. George Clark; from the Committee of Research in Problems of Sex, National Research Council. (4) For determination of extent of variation in cytoarchitectonic structure of selected portions of cerebral cortex, under the direction of Dr. George Clark; from Division of Mental Hygiene, U. S. Public Health Service. (5) A \$25,000 grant for a cancer training program from the National Cancer Institute, Washington, D. C. (6) A \$3,000 grant from the American Cancer Society, through the National Research Council, for a study of anti-antibodies in the diagnosis of cancer, to be directed by Dr. Irwin S. Neiman. (7) From U. S. Public Health Service, \$14,000 for the purpose of promoting the improvement and integration of cardiovascular teaching. Dr. Aldo Luisada, instructor in physiology and pharmacology, will conduct the program.

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#### University of Tennessee College of Medicine

Several grants have been received to support research projects in the department of physiology. The U. S. Public Health Service has supplied \$8,974 to support the studies under the direction



of Dr. J. P. Quigley on the pressures developed in the digestive tract and on the relation of the pyloric sphincter to the gastric evacuation process, and \$8,639 to support the studies of Dr. R. R. Overman on ionic and water balance in malaria and other infectious diseases.

The Upjohn Co. has provided \$4,000 to aid Dr. Overman's studies on the effects of adrenal cortical hormones on ionic balance in infantile diarrhea and malaria. The Atomic Energy Commission has provided \$4,100 to enable Drs. Overman and Zilversmit to study the turnover rates of sodium and potassium in adrenal insufficiency, and \$2,300 to aid the investigations of Dr. Lester Van Middlesworth on thyroid metabolism and on osteogenic sarcomas. The American Heart Association, Inc., has provided \$5,490 to aid the investigation of Dr. C. Riley Houck on renal hemodynamics.

Dr. Frank L. Roberts, professor of preventive medicine, has been appointed assistant dean. He succeeds Dr. Robert H. Miller, who is retiring from the university.

Dr. Henry Packer, associate professor since 1938 in the department of preventive medicine and public health, has been appointed professor and head of the department, succeeding Dr. Frank L. Roberts.

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#### University of Wisconsin Medical School

Appointments: Dr. Ray E. Green, assistant professor of pharmacology; Dr. Robert C. Parkin, assistant professor of clinical medicine and coordinator of postgraduate medical education.

Two long-time members of the university staff were granted emeritus professorships: Harold Bradley, emeritus professor of physiological chemistry; Ralph M. Waters, emeritus professor of anesthesia.

Fourth year medical students study in state mental hospitals as part of their preceptorship training. The program will give students an opportunity to view first hand the treatment of mental

illness and will augment their academic training with practical application. Under Wisconsin's preceptorship system, which has been carried on for years by the Medical School, senior medical students spend half their time at the university working in Wisconsin General Hospital and the other half at medical centers in the state. About half of the latter time is spent in small communities working under an established doctor.

Promotions: Dr. Edwin C. Albright, to assistant professor of clinical medicine; Dr. Helen P. Davis, to associate professor of clinical medicine; Dr. Alice A. Thorngate, to assistant professor of clinical pathology; Dr. Edwin N. Burns, to assistant professor of neuropsychiatry; Dr. John B. Wear, professor of urology; Dr. Simpson S. Burke, Jr., to assistant professor of anesthesia.

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#### University of Vermont College of Medicine

The Cardiovascular Unit at the Bishop DeGoesbriand Hospital was established for the special study and care of cardiovascular patients by means of modern scientific methods. It went into operation July 1. Investigative work now in progress is partly supported by funds from the National Heart Institute and the American Heart Association. A cardiovascular outpatient clinic, conducted by Dr. Christopher M. Terrien, will function in close cooperation with the unit. The cardiovascular unit will continue its refresher course on cardiovascular diseases for general practitioners in Northern New England and vicinity.

During the week of June 13th to 18th, a Course on Cardiovascular Diseases for Practicing Physicians was arranged by the Cardiovascular Unit (Director: W. Raab, M.D., professor of experimental medicine) which was recently established by the college of medicine, at the Bishop DeGoesbriand Hospital in Burlington.

Twenty-eight lectures were delivered

by 12 faculty members: Drs. J. Abajian, S. T. Allen, E. L. Amidon, J. H. Bland, T. Harwood, E. Lepeschkin, A. G. Mackay, W. Raab, J. W. Spelman, C. M. Terrien, H. Upton and F. W. VanBuskirk and by two guest speakers, Dr. Paul D. White of Boston and Dr. Mercier Fauteux of Montreal, Canada.

The lectures were attended by 100 physicians from Vermont, Maine, New Hampshire and New York. It is being planned to repeat this course in coming years.

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#### **Duke University School of Medicine**

Dr. Richard H. Corales, Jr., of New Orleans, La., assistant resident in neurosurgery at the Duke University School of Medicine, has been awarded a Damon Runyon Clinical Research Fellowship by the American Cancer Society. The award, for one year, was made on recommendation of the Committee on Growth of the National Research Council.

Dr. Corales will participate in a Duke research program in the field of brain tumors approved by the National Research Council under the direction of Dr. Barnes Woodhall and Dr. Guy Odom, professor and assistant professor of neurosurgery.

Two other postdoctorate fellowships for Duke neurosurgeons have been awarded by the Atomic Energy Commission to Dr. Frank Wrenn of Anderson, S. C., and by the National Institute of Health to Dr. Courtland Davis, of Alexandria, Va. Drs. Wrenn and Davis will conduct studies in cooperation with the Duke department of biochemistry and division of neurology. Financial support for research work in neurology at Duke for the coming academic year now totals \$16,456.

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#### **University of Kansas School of Medicine**

Promotions: Dr. Robert Guthrie, professor of bacteriology and head of

that department. He will succeed Dr. Noble P. Sherwood, who will continue to teach. Dr. R. L. Sutton, Jr., professor and chairman of the department of dermatology. Dr. Sutton succeeds Dr. C. C. Dennie, who will continue to teach. Buford Hamilton, to clinical professor of obstetrics and gynecology; Hubert M. Floersch and Robert L. Newman, to assistant professor of obstetrics and gynecology; John H. Wheeler, to assistant professor of medicine; Marvin L. Bills, G. L. Harrington and G. W. Robinson, Jr., to assistant professor of psychiatry and neurology; James Boley, to assistant professor of pathology; H. A. Wenner, to associate professor of pediatrics; Damon Walthall, to assistant professor of pediatrics; Donald L. Rose, to associate professor of physical medicine; C. E. Virden, to assistant professor of radiology; Paul W. Schafer, to professor of surgery; P. H. Lorhan, to clinical professor of surgery (anesthesia); Gretchen Guernsey, to assistant professor of surgery (anesthesia); T. B. Hall, to assistant professor of dermatology.

Resignations: Dr. J. Paul Frick, from department of dermatology; Dr. Eugene D. Liddy, from department of medicine; Dr. E. L. Gann, from department of otorhinolaryngology.

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#### **University of South Dakota School of Medicine**

The Federal Security Agency has given a grant of \$5,000 to coordinate and improve cardiovascular teaching. The project director for this work is Dr. T. E. Eyres, professor of public health. Dr. Willard O. Read, associate in physiology, will handle the pure physiological end of this teaching. Dr. Donald F. Rayl, associate in clinical physiology, Dr. Tom Billion, clinical associate in physiology, and Dr. T. H. Sattler, assistant professor of medicine, will handle the clinical end of this teaching correlating it with the basic science facet of cardiovascular teaching.

Dr. James C. Steele has been appointed assistant professor of radiologi-

cal anatomy and clinical assistant professor of radiology. Dr. F. J. Abts has been promoted to clinical associate professor of gynecology; Dr. C. B. McVay has been promoted to associate professor of surgical anatomy. Keith Sehnert and Sherman Lindell have been appointed Huron Foundation Fellows in physiology and pharmacology; Alvin C. Petersen has been appointed graduate assistant in anatomy and W. E. Engelhard and N. A. Trotter have been appointed graduate assistants in microbiology. Plans are being formulated for the construction of the new medical science building with construction slated to begin about the middle of February, 1950, at a cost of \$6,000,000.

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#### **Western Reserve University School of Medicine**

Promotions: George F. Badger, associate professor of biostatistics, promoted to professor; Dr. William D. Holden, surgery; Dr. D. F. Opdyke and Dr. Ewald R. Selkurt, physiology, from assistant professor to associate professor. To assistant professor: Dr. Frank M. Barry, surgery; Dr. Gerhard A. Brecher, physiology; Dr. John W. Patterson, anatomy; Dr. Richard W. Eckstein, medicine, and Dr. E. C. Weckesser, surgery. Dr. Walter Heymann, formerly assistant clinical professor of pediatrics, now assistant professor. Dr. Edward M. Chester and Dr. Harold G. Curtis, assistant clinical professors of medicine, and Dr. Clayton T. J. Dodge, assistant clinical professor in pediatrics.

New Appointments: Dr. Stuart H. Walker, professor of military science and tactics and fellow in pediatrics; Dr. J. Oliver Lampon, associate professor of microbiology; Dr. Russell S. Fisher, assistant professor of pathology.

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#### **Hahnemann Medical College**

Appointments: Dr. George H. Paff, associate professor of anatomy; Dr. Paul J. Grotzinger, full time in surgery in outpatient department; Dr. Carroll

F. Burgoon, associate professor of dermatology; Dr. Van B. Osler Hammett, clinical professor of psychiatry; Dr. Nathaniel G. Birk, associate professor of medicine; William L. Gaby, Ph.D., assistant professor of bacteriology; Carl Alper, Ph.D., assistant professor of biochemistry; William R. Brown, Ph.D., assistant professor of biochemistry; Dr. Harold E. Martin, instructor in anatomy.

Resignation: Dr. M. F. Ashley Montague.

Grants: A research grant of \$2,000 from Mr. and Mrs. Charles J. White for the study of hypertension in the departments of biochemistry and medicine. A research grant of \$2,000 from the Wm. S. Merrell Company, to be used in the division of pediatrics. A teaching grant of \$14,000 in cardiology from the U. S. Public Health Service.

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#### **Bowman Gray School of Medicine**

Representatives of the Atomic Energy Commission visited Bowman Gray June 22 to negotiate new contracts between the school and AEC for approximately \$25,000. The grants cover three projects in research using radioisotopes. One goes to Dr. Camillo Artom, head of the department of biochemistry, for continuation of study on the "Metabolism of Phospholipides in Tissues with the Aid of Radioactive Phosphorus as a Tracer." The second is to Dr. George T. Harrell, Jr., head of the department of internal medicine, for study of the "Distribution of Salt and Water in Acute Infections," and the third goes jointly to the two departments for study of the "Toxicity of Radioactive Phosphorus" with Dr. W. E. Cornatzer, assistant professor of biochemistry, and Dr. David Cayer, assistant professor of internal medicine, collaborating.

Dr. James P. Rousseau, professor of radiology since 1941, has resigned to go into private practice but will continue to serve as head of the department of radiology until a successor is named.

### **Saint Louis University School of Medicine**

Dr. Melvin A. Casberg, lieutenant colonel in the Office of the Surgeon General of the Army, and formerly chief of staff and chief of surgery at Harriman-Jones Clinic Hospital, Long Beach, California, has been appointed dean, effective August 1. A graduate of the Saint Louis University Medical School in 1936, Dr. Casberg served at Umri Mission Hospital in Berar, India, in 1941 before entering the Army, where he served through the North African and China campaigns and acted as physician to Madame Chiang Kai-Shek. Released from the Army in 1946, Dr. Casberg served as senior attending surgeon at Harbor General Hospital, Los Angeles County, California, and at Harriman-Jones Clinic Hospital in Long Beach until his reactivation in the Army early in 1949.

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### **Temple University School of Medicine**

Dr. Theodore L. Chase of Reno, Nevada, who contributed one million dollars to establish the Agnes Barr Chase Surgical Research Foundation in memory of his wife, has made an additional gift of \$400,000 toward the new buildings to be erected at the Temple University Medical Center.

At the Alumni dinner held during the American Medical Association meetings in Atlantic City, the alumni present subscribed \$75,450 to the annual giving fund of the medical school.

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### **Long Island College of Medicine**

Dr. Charles A. Gordon has been named emeritus professor of obstetrics and gynecology, and Dr. Carl H. Laws has been made professor emeritus of pediatrics. Retiring by reason of mandatory age requirements are Dr. Milton G. Wasch, associate professor of clinical radiology, and Dr. Harry W. Mayes, a member of the department of obstetrics and gynecology.

### **Stanford University School of Medicine**

New Appointments: Dr. Robert H. Alway, associate professor of pediatrics; Dr. Lyman M. Stowe, assistant professor of obstetrics and gynecology.

Research on cornea transplants will be carried out by Dr. Alfred E. Maumenee, head of the ophthalmology department, under a contract with the National Advisory Council of the U. S. Public Health Service.

September 19-23, inclusive, the Medical School in cooperation with the San Francisco Department of Public Health and the San Francisco Hospital, will give postgraduate courses for practitioners. These courses will include general surgery, internal medicine, dermatology, fractures, surgical anatomy and operative technique, laboratory diagnosis, endocrinology, surgical specialties, anesthesiology and clinical ophthalmology. The registration fee is \$75. Applications should be addressed to the dean.

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### **Medical College of Alabama**

Three faculty members have reached the retirement age. Drs. James S. McLester and James M. Mason, professors of medicine and surgery, respectively, and Dr. Stuart Graves, dean emeritus and director of admissions. Dr. McLester has served as professor since 1920. Dr. Mason was named professor of surgery in 1945. Dr. Graves was dean of the two year school at Tuscaloosa for six years; when the school was moved to Birmingham in 1945 and offered a four year curriculum, he became director of admissions.

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### **McGill University Faculty of Medicine**

Funds amounting to \$242,446 for the year 1949-1950 have been received from the Dominion-Provincial Health Grants for the development of mental health in the English speaking community of Quebec. The chairman of the department of psychiatry, Dr. D. Ewen Cameron, has been asked by the Provincial

Government to coordinate plans and administer these funds. The Dominion-Provincial Health Grants run for ten years, and the allocation for mental health increases from an initial \$4,000,000 per annum to \$7,000,000 per annum within six years.

Dr. B. Silverman, director of the Mental Hygiene Institute, and Dr. M. Prados have been promoted to associate professor of psychiatry.

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#### **College of Medical Evangelists**

A School of Tropical and Preventive Medicine is to be developed in Loma Linda, in conjunction with the College of Medical Evangelists. Both graduate and undergraduate medical students will be given training in tropical medicine. Special short courses will be conducted for nonmedical missionaries preparatory to their departure for overseas posts. Dr. Harold N. Mozar, assistant professor of internal medicine, has been named director of the new unit. During World War II Dr. Mozar served in New Guinea and was chief of the Communicable Diseases Section of the 47th General Hospital.

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#### **State University of Iowa College of Medicine**

Following the recent death of Dr. Mayo H. Soley, dean, President Virgil M. Hancher appointed an executive committee to carry on the administrative functions of the college of medicine. The committee consists of Dr. Robert Tidrick of the department of surgery as chairman, Dr. Willis Fowler of the department of medicine, Dr. Rex Ingram of the department of anatomy, Dr. Emory Warner of the department of pathology and Dr. Wilbur R. Miller of the department of psychiatry. The executive committee is authorized to exercise all of the powers and perform all of the functions of the dean until a permanent dean can be appointed or until a better interim solution can be found.

#### **University of Pennsylvania School of Medicine**

In the will of the late A. Atwater Kent, philanthropist and retired radio manufacturer, the school of medicine will receive \$250,000 for medical research. The gift, to be held in trust, will be paid annually until the funds are exhausted.

A patient who underwent successful surgery at the University of Pennsylvania's Graduate School of Medicine has made a gift anonymously to the university of \$200,000, the proceeds of which are to be used for the advancement of medical science. It will be known as "The Gabriel Tucker Fund for Bronchology, Esophagology and Laryngeal Surgery."

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#### **Marquette University School of Medicine**

A common interest in the work of Ramon y Cajal has brought together Father Maneul Ubeda, a Dominican priest and doctor from Madrid, Spain, and Dr. Clement Fox, associate professor of anatomy at Marquette.

Father Ubeda, who received the doctor of medicine degree at the University of Madrid in 1934, is interested in psychophysiology, a field which involves experimental neuroanatomy. He studied for three years under Prof. Francisco Tello, immediate successor to Cajal as director of the Ramon y Cajal institute in Madrid.

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#### **Stritch School of Medicine of Loyola University**

The school is the recipient of a \$10,000 grant from the Chicago Heart Association. This money will be used for the expansion of the present heart research program, particularly along the lines of a department of cardiovascular research. Dr. Italo F. Volini, chairman of the department of medicine, will be one of the principal investigators in the research program.

**University of Rochester  
School of Medicine**

Dr. George H. Whipple, dean, is the 1949 recipient of the Albert David Kaiser Medal of the Rochester Academy of Medicine for "his distinguished services to medical science and the distinction he has brought to the city through the development of the University of Rochester School of Medicine and Dentistry."

Wallace O. Fenn, Ph.D., professor and chairman of the physiology department, was recently appointed assistant dean of the school. Dr. Fenn has been on the medical school faculty for 25 years.

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**Harvard University  
Medical School**

Dr. William A. Hinton has been appointed clinical professor of bacteriology and immunology. Dr. Hinton, who has been on the medical school staff more than 25 years, thus becomes the first Negro to hold a professorship in Harvard University. An authority on the detection and treatment of venereal disease, Dr. Hinton's name is known among medical men for the Hinton Test and the Davies-Hinton test for syphilis. Dr. Hinton had done extensive research earlier in the use of the Wasserman and Kahn tests.

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**University of Arkansas  
School of Medicine**

Dr. Benjamin B. Wells, director of cancer research at the M. D. Anderson

Hospital for Cancer Research, Houston, Texas, assumed his duties July 1 as head of the department of internal medicine. Dr. Wells served on the faculty of the University of Arkansas from 1946 to 1948 as professor of medicine and also as dean the last year.

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**Johns Hopkins University  
School of Medicine**

Richard H. Shryock, Ph.D., professor of American history and since 1938 lecturer in medical history at the University of Pennsylvania, Philadelphia, has been appointed director of the Institute of the History of Medicine and William H. Welch professor of the history of medicine. The Hopkins Institute of the History of Medicine was founded by Dr. William H. Welch in 1926.

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**University of Kansas  
School of Medicine**

Dr. Richard L. Sutton, formerly associate professor of dermatology, has been appointed chairman of the department, succeeding Dr. Chas. C. Dennie, retired on age.

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**University of Washington  
School of Medicine**

First head of the new psychiatric department is Dr. Herbert S. Ripley. He has been an assistant professor of psychiatry at Cornell University Medical College.



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## General News

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### Canadian Medical Fellowship Program Sponsored by the A. A. M. C.

Opportunities for training in the United States of America will be offered by the W. K. Kellogg Foundation to a limited number of Canadian citizens who are members, or potential members of the faculties of the medical schools of Canada.

**Purposes of the Fellowship Program:** To increase inter-American understanding and to stimulate cultural exchange between the United States and Canada. To strengthen the faculties of medical schools in Canada by preparing young men for academic careers, and indirectly to promote the health and welfare of the people of Canada. To encourage the further development of continuing and the decentralization of medical education for the practicing physicians of Canada.

**Scope of the Fellowship Program:** Provision will be made for placing the selected fellows in well recognized teaching centers. Educational programs based on their previous education and experience and future needs will be planned for the fellows and supervised by their faculty advisors. Duration of the fellowships will be for twelve months. Consideration will be given to an extension of the fellowship, when indicated, for men who have demonstrated exceptional ability.

**Principal Qualifications for Eligibility:** Qualified candidates who are citizens of Canada and graduates of recognized medical schools. Individuals who have, or will have on completion of their fellowships, teaching affiliations with medical schools in Canada. The candidate must be recommended by the dean of the medical school at which he plans to teach.

**Selection of Fellows:** Candidates shall be chosen in cooperation with the dean of the medical school at which they

are teaching or planning to teach. The general policy shall be not to grant fellowships to individuals who are already in the United States on fellowships from other agencies. The applicant shall submit to the W. K. Kellogg Foundation three copies each of his application, supporting documents, and letter of recommendation from the dean of his medical school stating that the fellow will have a teaching affiliation with that school at the completion of his fellowship. Applications should be submitted early, preferably six months to one year before the fellowship is to be activated. Successful applicants will be notified of awards as soon as possible after receipt of their applications.

**Financial Responsibility of the W. K. Kellogg Foundation:** The Foundation will provide each fellow with a monthly stipend of approximately \$150. It will be necessary for the fellow to have funds from other sources for clothing and recreation. If fellows bring their wives or other members of their families to the United States during their period of fellowship, they must demonstrate that they have adequate financial resources. The Foundation will provide funds for transportation for the fellow from his home in Canada to the institution where he is to study, other approved travel within the United States, and from the institution to his home in Canada at the end of the fellowship. The Foundation will provide the cost of essential textbooks recommended, in advance of purchase, by the dean or department head of the institution at which the fellow is studying. Such books are to become the property of the medical school at which the fellow will be teaching when he returns to Canada. The Foundation will provide tuition for approved courses. Consideration will be given to other educational expenses on an



individual basis. The Foundation will mail monthly stipends and other checks in advance directly to the fellows at their places of residence in the United States.

**Procedure:** The applicant shall send to the Foundation three copies each of the application, supporting documents, and the letter of recommendation from the dean. The Foundation will approve or disapprove the application and will forward, for approved candidates, one copy each of the application and the letter of recommendation from the dean to the medical school which has been selected for the educational experience of the fellow, one copy of each to the Chairman of the Committee on International Relations of the Association of American Medical Colleges, and shall retain the other set in its own files. The Foundation will notify the educational center where the fellow is to study of the expected date of his arrival.

**Responsibilities of Agencies and Fellows:** The Canadian Medical Schools: (a) To refer to the Foundation carefully selected candidates who will qualify for teaching positions upon completion of their fellowships: (b) to agree in writing, through their deans or directors, to provide faculty appointments and teaching facilities for fellows from their schools, on completion of their period of training in the United States. (c) To assist the Foundation and the U. S. medical schools in planning a satisfactory educational experience for the fellows. (d) To report periodically to the Foundation regarding the fellow's progress after he returns to his teaching position in Canada.

**The W. K. Kellogg Foundation:** (a) In cooperation with medical schools, to review personal and professional qualifications of candidates and to select fellows from such candidates. (b) To assign the fellow to the medical school most suited to his needs and to provide such other experience for the fellow, while he is in the United States, as will be conducive to a satisfactory experience in this country and to the furthering of inter-American understand-

ing. (c) By means of correspondence and personal visits, to follow closely the experiences of the fellow and to adjust his program promptly as may be indicated. (d) To keep on file for each fellow: (1) One copy of the application. (2) One copy of the recommendation of the dean. (3) One copy of the formal appointment of the fellow.

**The U. S. Medical School:** (a) To provide each fellow with such professional, cultural and social experiences as will best attain the objectives of the program. (b) To notify the W. K. Kellogg Foundation of the date of the fellow's arrival and formal registration at the educational center. (c) To submit statements to the W. K. Kellogg Foundation for tuition and other authorized expenses related to the fellow's educational experience. (d) To select a faculty advisor for each fellow, to counsel and advise the fellow concerning both personal and professional problems. (e) To report at such times as may be indicated to the W. K. Kellogg Foundation concerning the progress of the fellow.

**The Fellow:** (a) To fulfill the qualifications listed under eligibility. (b) Upon arrival at the educational center in the United States, to notify the W. K. Kellogg Foundation of the date upon which he began his fellowship and his mailing address. (c) To observe the prevailing rules and regulations governing routine work, study and conduct in the educational center to which he has been assigned. (d) To sign a statement promising to return to Canada and to fulfill his teaching responsibilities at the termination of his fellowship.

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#### **New York State University Medical Schools**

The trustees of the new State University recommended that the university locate its metropolitan medical center in Brooklyn and its up state medical center in Syracuse. The trustees adopted a resolution, subject to approval by the Board of Regents, authorizing the executive officers of the State University

to enter into agreements for incorporating into the university the Long Island College of Medicine, Brooklyn, and the Syracuse University College of Medicine. The state plans to take over the colleges of medicine prior to next September and to operate them as integral parts of medical centers at that time. More than half of the \$10,000,000 appropriated by the 1949 legislature for the State University will probably be spent on the medical centers. When the State University takes over the colleges, it is expected that most of the faculty members will be retained and the faculties enlarged.

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#### Symposium on Plasma Proteins

A symposium on the subject of plasma proteins will be held in Chicago, September 23 and 24, under the auspices of the University of Illinois College of Medicine and sponsorship of The Robert Gould Research Foundation.

A preliminary list of the speakers includes James B. Allison of Rutgers; S. Howard Armstrong and Paul Cannon of Chicago; Philip P. Cohen of Madison; Chas. S. Davidson of Boston; Carl Dittmer of Tallahassee, Florida; Robert Elman of St. Louis, Hughes Gounelle of Paris; Irving M. London and David Shemin of New York; Sidney Madden of Upton, New York; J. L. Oncley of Boston; Abraham White of Los Angeles; Bacon F. Chow, of Baltimore, and Fuller Albright, of Boston.

In addition to the speakers there will be an audience of invited guests and the papers will be published and available in book form. A feature of the symposium will be the presence of junior associates of the various speakers, as guests of The Robert Gould Research Foundation.

The Robert Gould Research Foundation is a nonprofit institution dedicated to public health and welfare and at present devoting its funds primarily to the support of scientific research in

animal and human nutrition. It supported the symposium on nutritional anemia held under the auspices of the College of Medicine, University of Cincinnati, in 1947. Recipients of grants-in-aid include the University of Cincinnati, Cornell University, the National Research Council, Ohio State University, the Johns Hopkins University, the University of Toronto, University of Wisconsin and the University of Kentucky.

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#### North Carolina Medical Foundation

More than 200 physicians and laymen met at the University of North Carolina, Chapel Hill, May 28 and set up the Medical Foundation of North Carolina, the chief purpose of which is to create an endowment "to promote, by financial assistance and otherwise, all types of education, service and research in the fields of preventive and curative medicine at the medical and dental schools of the university; and to render assistance to industry, business and agriculture and to agricultural and industrial workers through programs designed to improve rural and urban health."

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#### Markle Scholars in Medical Science

The John and Mary R. Markle Foundation invites deans of accredited medical schools in the United States and Canada to make nominations for the third group of Scholars in Medical Science on or before December 1, 1949. Each school may nominate one candidate. The purpose of the program is to help promising young men and women with a strong interest in teaching and research to become established in academic medicine. Candidates should have completed the usual fellowship training in some area of science related to medicine and should hold, or expect to hold, in the academic year 1950-1951 a full time faculty appointment on the staff of a medical school.

Grants of \$25,000, payable at the rate of \$5,000 annually, will be made to the schools over a five year period

for the support of each Scholar finally selected, his research, or both. The number of Scholars to be appointed in 1950 has not yet been determined. Sixteen were chosen in 1948, and thirteen in 1949. A new booklet describing the plan, with suggestions for making application, is available on request from the Foundation, 14 Wall Street, New York 5, N. Y.

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#### State University of New York

President Alvin C. Eurich of the State University of New York announced the appointment of Dr. Lester J. Evans as Consultant in Medical Education to the State University. Dr. Evans, who is Medical Associate of the Commonwealth Fund, will assume his duties with the university immediately. Dr. Evans expects to continue his duties with the Commonwealth Fund on a part time basis while serving as consultant to the State University of New York.

Dr. Evans will assist the Board of Trustees of the university and the officers in formulating plans for the establishment of the overall State University medical education program. He will also work with the administrative staffs of the two State University medical schools in Brooklyn and Syracuse in coordinating their activities with the overall State University program and objectives. He will also assist in the preparation of the State University capital and expense budgets for the medical education program for the academic years 1949-1950 and 1950-1951.

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#### University of Puerto Rico School of Medicine

The new school of medicine to be established in San Juan will start operation during the 1950-1951 school year. The school will be set up utilizing present facilities of the Postgraduate School of Tropical Medicine. The Superior Council of Education adopted a resolu-

tion to ask several professors on the staff of the School of Tropical Medicine who resigned their positions soon after the law creating the new school was approved by the governor to continue in their posts. Dr. Enrique Koppisch is now acting director of the School of Medicine.

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#### Warren Triennial Prize

The Warren Triennial Prize for the best dissertation on some special subject in physiology, surgery or pathology will be awarded this year. Essays may be written in English, French or German and must be typewritten and suitably bound. Work that has previously been published will not be considered, and original work will be given a high value. Essays will be received until November 15. The awards will consist of a first prize of \$1,500 and a second prize of \$500. The judges will be the General Executive Committee of the Massachusetts General Hospital, Boston.

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#### Traveling Fellowships

Smith, Kline & French Laboratories, of Philadelphia, established two traveling fellowships, the purpose of which is to encourage postdoctorate study and investigation in the fields of physiology and pharmacology. The fellowships, of \$5,000 each plus traveling expenses, have been awarded to Edward B. Ferguson, Jr., M.D., of Tulane University, and Charles J. Kensler, Ph.D., of Cornell University, both of whom will spend a year in England. Dr. Ferguson will study the physiology of the kidney under Professor R. A. McCance, at Cambridge University, and Dr. Kensler will carry on pharmacological research under Professor J. H. Burn, at Oxford University.

♦ ♦

#### New Texas State School

The Southwestern Medical College, Dallas, has been taken over by the state as a second medical school in order to increase the output of physicians.

## Book News

### Operative Technic in General Surgery

Edited by Warren H. Cole, M.D., Professor and Head of the Department of Surgery, University of Illinois College of Medicine, with an introduction by Frank H. Lahey, M.D. Appleton-Century-Crofts, Inc., New York. 1949.

The list of contributors to this text is sufficient evidence for concluding that this is a book to be recommended for use by any physician who wishes to devote himself to surgery. It presents methods of performing surgical operations by a large number of busy surgeons actively engaged in the performance of the operative procedures described by them. Diagnosis and treatment are covered equally well and thoroughly in the twenty-three chapters and the more than 500 illustrations of various kinds.

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### Textbook of Neuropathology

By Ben W. Lichtenstein, M.D., Associate Professor of Neurology, University of Illinois College of Medicine. W. B. Saunders Company, Philadelphia. 1949. Price, \$9.50.

This book is intended to serve medical students, and graduates training in neurology, psychiatry, pathology and neurological surgery. The text is divided into 17 chapters. One chapter is devoted to syndromes, paralyzes and uncommon diseases, many with eponimic names, which should prove helpful to students. Another chapter is a neuro-anatomical supplement. The final chapter is a neuropathological supplement. It presents a complete histologic technic for the preparation of slides and gross specimens. Nearly 300 illustrations supplement the text. The bibliography is very extensive.

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### Mental Hygiene in Public Health

By Paul V. Lemkau, M.D., Associate Professor of Public Health Administration, School of Hygiene and Public Health, Johns Hopkins University. McGraw-Hill Book Company, Inc., New York. 1949. Price, \$4.50.

Of special interest to those working in the fields of preventive psychiatry, public health, child guidance, developmental psychology and general medical practice. Psychiatric problems are treated in terms of action possible at the present time. The development of personality from the primordial germ plasma to death is traced, illustrating at each stage and change in development what the possibilities are for modification in the direction of better mental health.

### Demonstrations of Physical Signs in Clinical Surgery

By Hamilton Bailey, F.R.C.S., Surgeon in the Genitourinary Department, Royal Northern Hospital, London. Ed. 11. The Williams & Wilkins Company, Baltimore. 1949. Price, \$9.

A brief but complete discussion of the application of physical diagnosis to surgery well illustrated by more than 600 black and white and color reproductions of numerous surgical lesions and methods of conducting a physical examination on a surgical patient. This is another "must" book for the medical student.

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### The Compleat Pediatrician

By Wilburt C. Davison, Professor of Pediatrics, Duke University School of Medicine. Ed. 6. Duke University Press, Durham, N. C. 1949. Price, \$4.75.

It would seem that any one in possession of this encyclopedic book of information on children and their diseases should be able to practice pediatrics. It cannot be surpassed for reliable and speedy reference. This revision is thorough, being based on information gleaned from about 20,000 references carefully analyzed and summarized. Needless to say, the book is up to date. The author deserves commendation for his thorough job in making a book of this type available. Why not extend this plan to other clinical fields?

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### Bensley's Practical Anatomy of the Rabbit

Revised and edited by E. Horne Craigie, Ph.D., Professor of Comparative Anatomy and Neurology, University of Toronto. Ed. 8. The Blakiston Company, Philadelphia. 1948. Price, \$4.25.

An elementary laboratory textbook in mammalian anatomy supplemented by a brief exposition of the relation of this kind of study to the content and outlook of cognate biological sciences.

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### Recent Advances in Oto-laryngology

By R. Scott Stevenson, M.D., Surgeon, Metropolitan Ear, Nose and Throat Hospital, London. Ed. 2. The Blakiston Company, Philadelphia. 1949. Price, \$6.00.

Revised and much of it rewritten. Stands between a yearbook and a textbook, with a survey of recent literature, assessing, commenting and arriving at conclusions. A book for the practitioner.

**Industrial Toxicology**

By Alice Hamilton, M.D., Assistant Professor Emeritus of Industrial Medicine, Harvard School of Public Health, and Harriet L. Hardy, M.D., Assistant in Medicine, Massachusetts General Hospital, Boston. Ed. 2. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, New York. 1949. Price, \$7.50.

Revised and rewritten, with a new chapter on Beryllium and much new material covering problems of poisoning arising in new industries. A chapter on radiant energy has also been added which takes up ultraviolet and infra-red rays, radioactive substances and the new radioactive isotopes.

**Manual of Human Dissection**

Edited by Charles E. Tobin, Ph.D., Associate Professor of Anatomy, University of Rochester School of Medicine. Ed. 2. The Blakiston Company, Philadelphia. 1949. Price, \$4.50.

This is a very timely book. It presents a workable balance between the amount of procedure for dissection and descriptive text. It is brief, which is desirable since the time allotted to gross anatomy has been decreased in keeping with similar reductions in all subjects represented in the medical curriculum. The book is an autonomous unit. It can be used with any larger text in anatomy. It is definitely a manual of human dissection.

**Blakiston's New Gould Medical Dictionary**

Edited by Harold W. Jones, M.D., Colonel, U. S. Army, Retired; Normand L. Hoerr, M.D., Professor of Anatomy, Western Reserve University School of Medicine, and Arthur Osol, Ph.D., Professor of Chemistry, Philadelphia College of Pharmacy and Science. The Blakiston Company, Philadelphia. 1949. Price: Textbook edition, \$8.50; thin paper edition, \$10.75; deluxe edition, \$13.50.

The publishers claim that this is the first new medical dictionary in 38 years. It is monumental, containing 1,300 pages. The editors were assisted by an editorial board of more than 100 contributors. Hundreds of new words are included that cannot be found in any other medical dictionary. It combines a system of modern phonetic spelling with syllabification, to give alternate pronunciations and to cross reference from definitions to illustrations. Special tables of arteries, enzymes, vitamins, monstrosities, etc., covering about 140 pages are included in the appendix. Bound into the center of the book is an atlas with 252 illustrations, 129 in color. All branches of medicine and allied science are covered, including medical physics and

chemistry, biology and botany and medico-legal terms. Pronunciation is indicated by accents and syllable division and, when necessary, by a simple system of phonetic respelling based on familiar conventional orthography.

**The Science and Art of Joint Manipulation: Vol. I: The Extremities**

By James Mennell, M.D., Consulting Physician in Physical Medicine, St. Thomas Hospital, London. Ed. 2. The Blakiston Company, Philadelphia. 1949. Price, \$7.50.

Three new and two alternate techniques are included in this revised edition. Two concern the manipulation of the shoulder joint and one concerns that of the joints of the cuboid. The actual techniques of joint manipulation occupy a large portion of the book. Each joint in the body receives individual treatment. Three hundred illustrations of various kinds elucidate the text.

**Laboratory Diagnosis of Protozoan Diseases**

By Charles F. Craig, M.D., Emeritus Professor of Tropical Medicine, Tulane University of Louisiana School of Medicine. Ed. 2. Lea & Febiger, Philadelphia. 1949. Price, \$6.50.

Describing virtually all of the new and improved methods of diagnosis. The author's long experience with these diseases is responsible for this complete text on protozoan diseases. All forms of protozoa that are parasites of man are fully described. The illustrations, some in color, are most helpful. The style is concise and very readable. This is a book that can be recommended highly not only to practitioners but also to students.

**Surgical Management of Vascular Diseases**

By Gerald H. Pratt, M.D., Associate Clinical Professor of Surgery, New York University, etc. Lea & Febiger, Philadelphia. 1949. Price, \$10.

Here are assembled, classified and graphically discussed the accepted methods of cardiovascular diseases as gained from the treatment of more than 5,000 patients. Treatment is emphasized but diagnosis and pathology are not neglected. Many of the several hundred illustrations are drawings made right in the operating room. The text is divided into 5 sections: I—nomenclature and case history; II—the arterial system; III—the venous system; IV—the lymphatic system; V—surgery of the heart. Each section is further divided into chapters totaling thirty-five. The entire subject is covered, completely and concisely.

**The Epitome of Andreas Vesalius**

Translated from the Latin by L. R. Lind, Ph.D., University of Kansas, with anatomical notes by C. W. Asling, M.D., Ph.D., University of California, and a foreword by the late Logan Clendening, M.D. The Macmillan Company, New York. 1949. Price, \$7.50.

Those interested in medical history will welcome this book. It is a brief summary of what Vesalius said he was trying to do, what he found and what he meant. It is a masterpiece of condensation given in the words of Vesalius and freed from controversial arguments. The Latin text, with illustrations, is also given although the print is so fine that it can be read only with the aid of a magnifying lens.

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**Pathology of the Nervous System:  
A Student's Introduction**

By J. Henry Biggart, M.D., Professor of Pathology, Queen's University, Belfast. Foreword by Professor A. Murray Drennan, M.D. Ed. 2. The Williams & Wilkins Company, Baltimore. 1949. Price, \$6.

This book is limited to the pathology of the central nervous system. It covers the ground well but briefly, yet concisely. The author's experience as a pathologist and a teacher is well reflected and will be a distinct

aid to the student. The text is well illustrated by almost 250 illustrations, all reproductions of slides; 10 being in colors. A limited bibliography is given for use by post-graduate students.

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**Change of Life:  
A Modern Woman's Guide**

By F. S. Edsall, with a foreword by Emil Novak, M.D., Assistant Professor of Gynecology, Johns Hopkins Medical School. Woman's Press, New York. 1949. Price, \$2.

Every woman in her forties—whether married or single—is troubled by certain personal questions as she enters on that time of her life known as "change of life." This book gives the answers. It is not only a book for women but medical students and practitioners will do well if they read it. It gives much valuable information.

\* \*

**The Practice of Refraction**

By Sir Stewart Duke-Elder, M.D., Director of Research, Institute of Ophthalmology, University of London. Ed. 5. The C. V. Mosby Company, St. Louis. Price, \$6.25.

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